



CALL NO. 101

CONTRACT ID. 191217

WARREN COUNTY

FED/STATE PROJECT NUMBER NHPP IM 0165 (005)

DESCRIPTION WILLIAM H. NATCHER PARKWAY (9007 / I-165) IN WARREN COUNTY

WORK TYPE ASPHALT REHAB INTERSTATE/PARKWAY

PRIMARY COMPLETION DATE 10/31/2019

LETTING DATE: May 24,2019

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME May 24,2019. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 9.50%

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 03

CONTRACT ID - 191217
NHPP IM 0165 (005)
COUNTY - WARREN
PCN - DE11490071917
NHPP IM 0165 (005)

WILLIAM H. NATCHER PARKWAY (9007 / I-165) IN WARREN COUNTY (MP 7.823) ADDRESS PAVEMENT
CONDITIONS ON WILLIAM H. NATCHER PARKWAY IN BOTH DIRECTIONS (MP 18.167), A DISTANCE OF 010.34
MILES.ASPHALT REHAB INTERSTATE/PARKWAY SYP NO. 03-20019.00.
GEOGRAPHIC COORDINATES LATITUDE 37:02:28.00 LONGITUDE 86:34:06.00

COMPLETION DATE(S):

COMPLETED BY 10/31/2019

28 CALENDAR Days

APPLIES TO ENTIRE CONTRACT
INTERMEDIATE MILESTONE -
BRIDGE RESTORATION
COMPLETION

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

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

CIVIL RIGHTS ACT OF 1964

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

NOTICE TO ALL BIDDERS

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

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

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

SECOND TIER SUBCONTRACTS

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

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

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

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

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

DBE GOAL

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

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

OBLIGATION OF CONTRACTORS

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

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

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

CERTIFICATION OF CONTRACT GOAL

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

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

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

DBE PARTICIPATION PLAN

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

The DBE Participation Plan shall include the following:

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

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

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

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

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

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

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

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

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

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

FAILURE TO MEET GOOD FAITH REQUIREMENT

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

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

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

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

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

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

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

PROMPT PAYMENT

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

CONTRACTOR REPORTING

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

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

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

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

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

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

DEFAULT OR DECERTIFICATION OF THE DBE

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

1/27/2017

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO
PREFERENCE ACT (CPA).**

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

SECTION 7 is expanded by the following new Article:

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

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

EXPEDITE PROJECT WORK ORDER

The Contractor may request that the Department expedite the work order for this project to allow for maximization of time to complete the work. In order for the Department to accomplish this task, the Contractor may be required to “hand carry” all required project documentation to facilitate the process. Immediately UPON NOTIFICATION OF AWARD OF THE CONTRACT, deliver required project documentation to:

Division of Construction Procurement
200 Mero St.
Frankfort, KY 40602

PROJECT TRAFFIC COORDINATOR (PTC)

Be advised this project is a significant project pursuant to section 112.03.12.

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.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

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

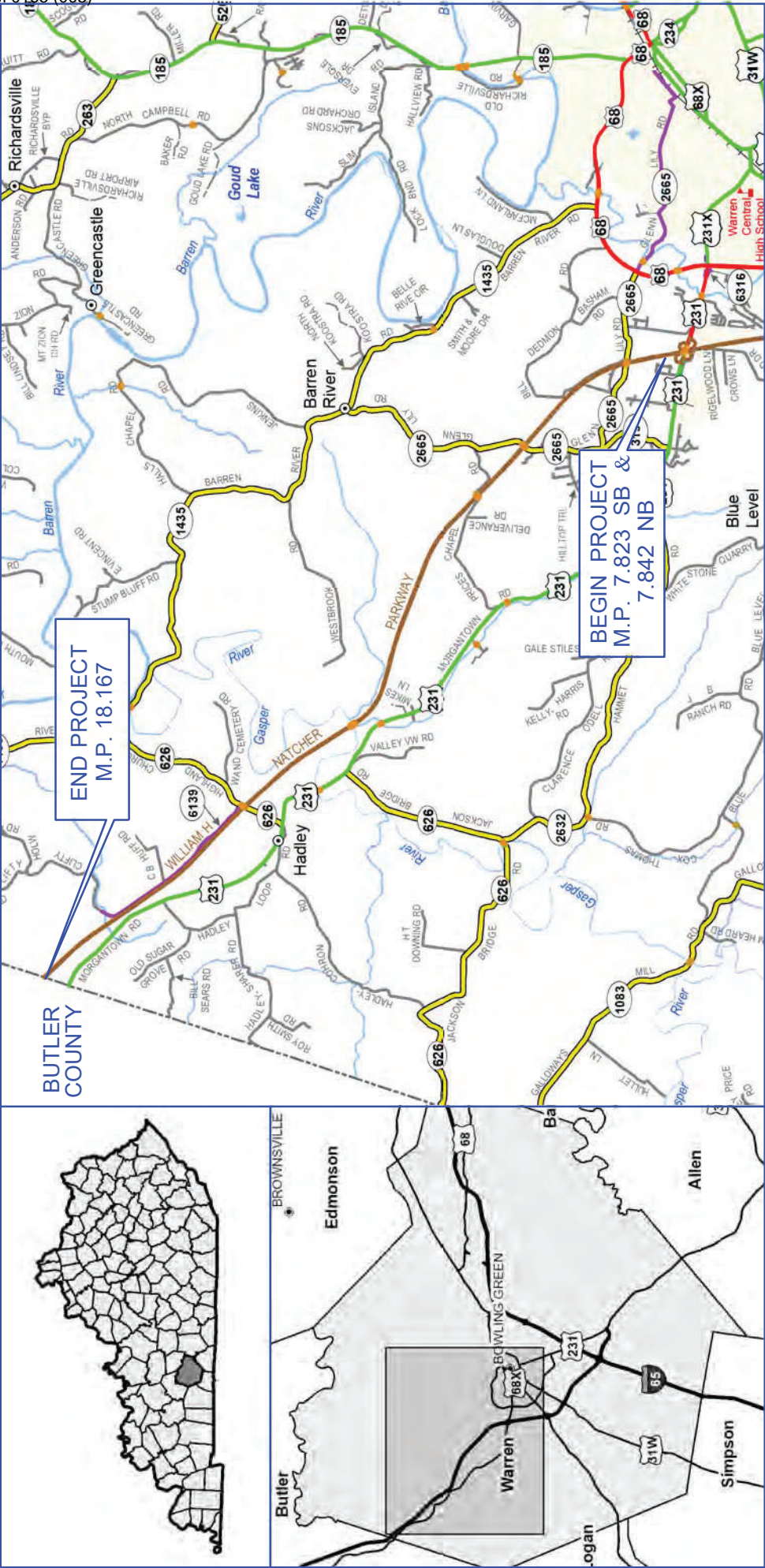
The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of \$1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all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

ASPHALT PAVEMENT RIDE QUALITY CATEGORY A

The Department will apply Pavement Rideability Requirements on this project in accordance with Section 410, Category A.

OPTION A

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



311MBC-046 U.S. 460
Frankfort, KY 40601
502-695-9800

PROJECT NUMBER: NHPP IM 0165 (005), FD52 114 0165 007-019

ITEM NUMBER: 3-20019 LETTING DATE: MAY 24, 2019

RECOMMENDED BY: ANDRE JOHANNES, P.E. DATE: _____

PLAN APPROVED BY: _____ DATE: _____

FHWA APPROVED BY: _____ DATE: _____

Project Manager

State Highway Engineer



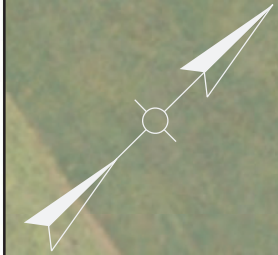


SCALE 1"=200'

I-165
DETAIL SHEETS
SHEET 2 OF 27

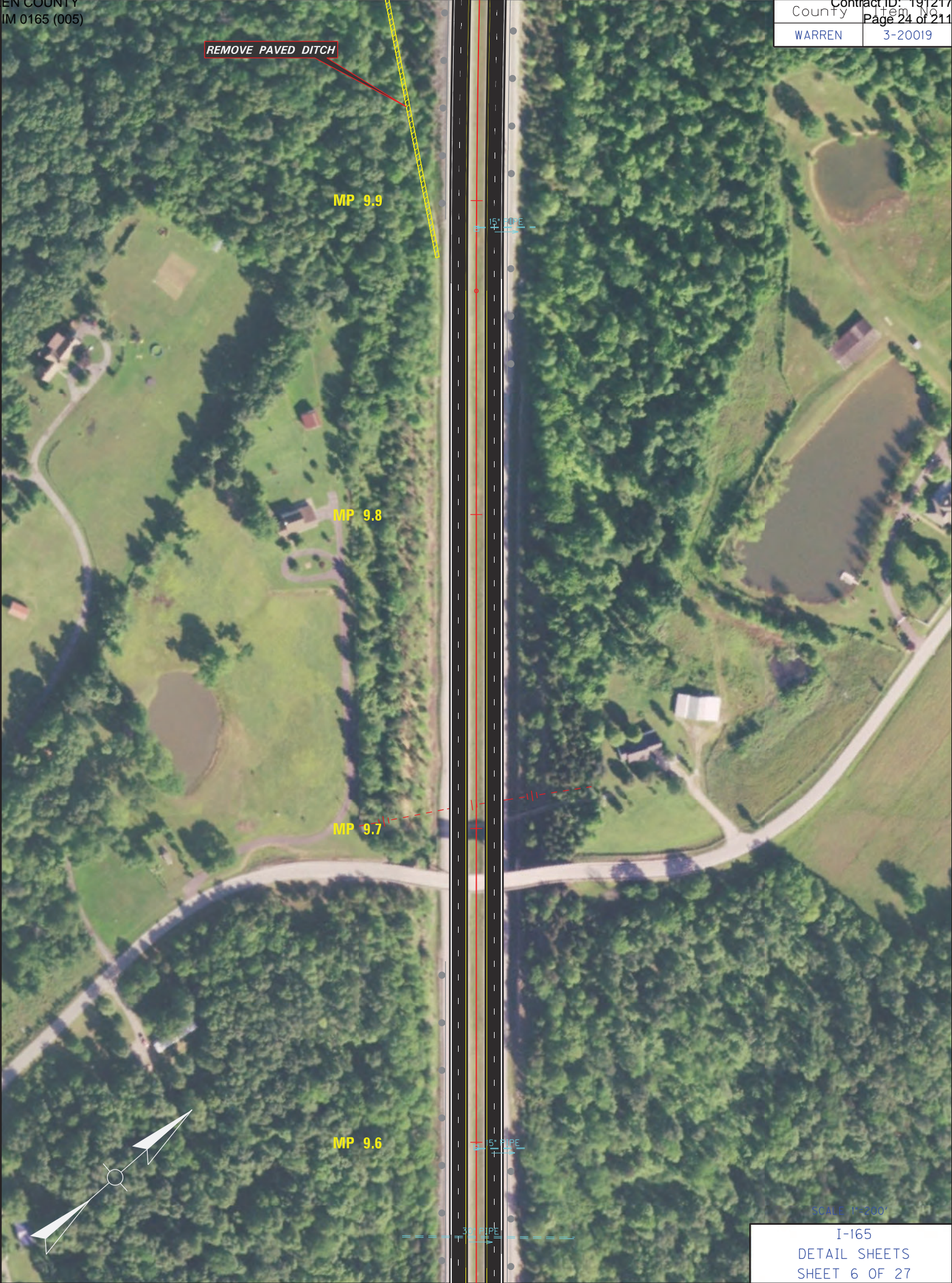


SCALE 1"=200'

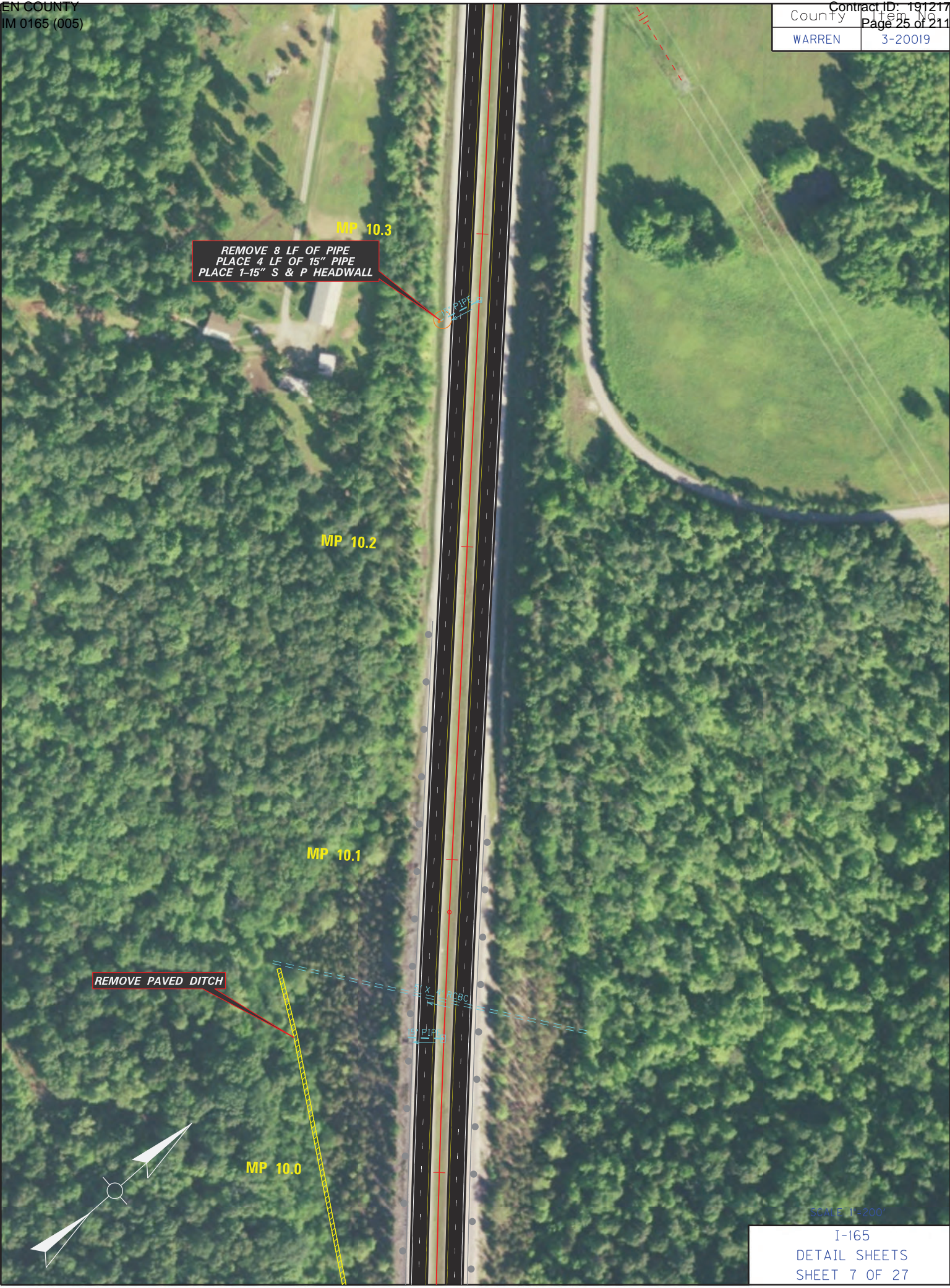


SCALE 1"=200'

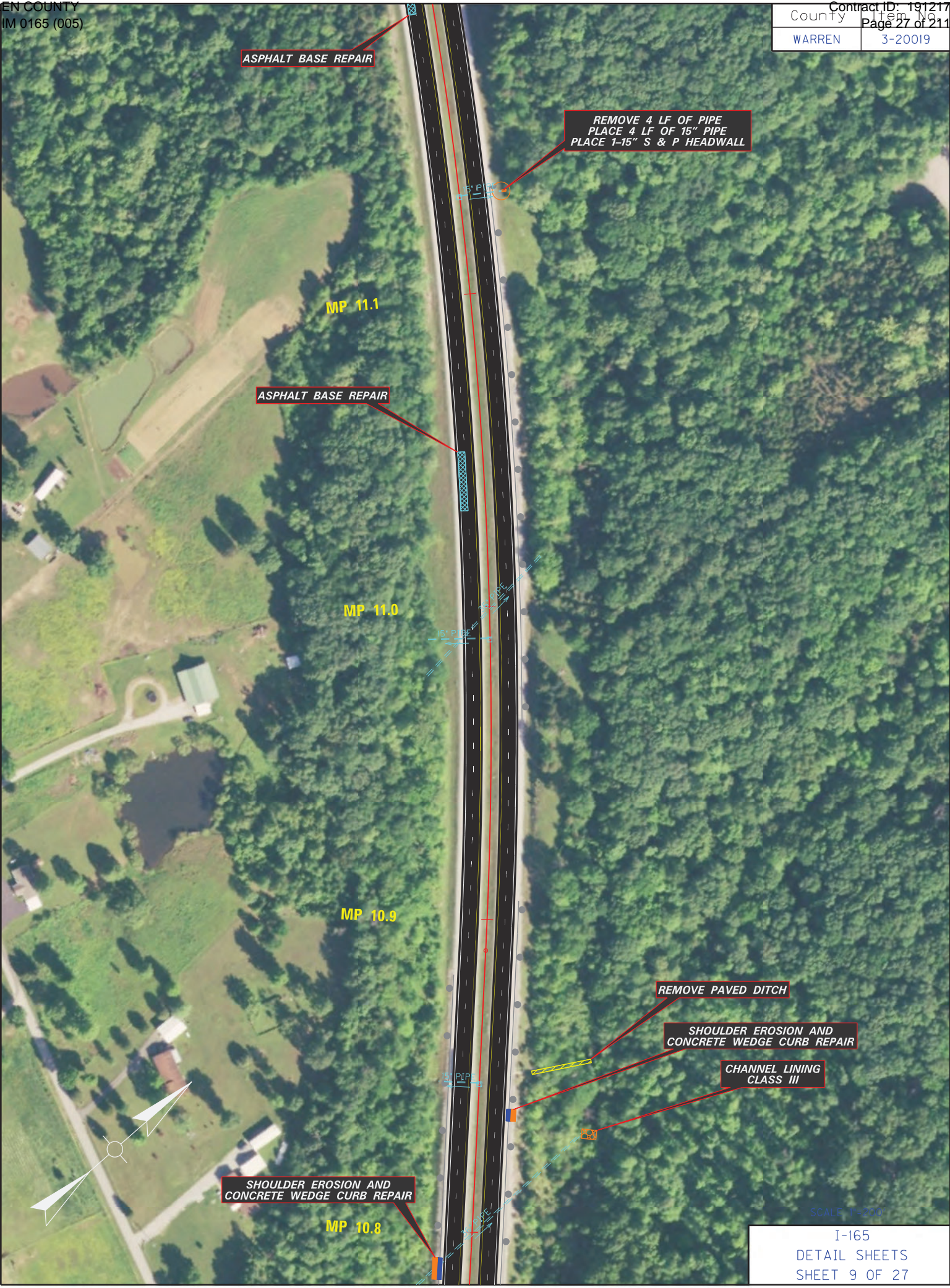




SCALE 1"=100'







SCALE: 1"=200'





SCALE 1"=200'



SCALE 1"=200'



SCALE 1"=60'



SCALE 1"=200'

WN - 9007
DETAIL SHEETS
SHEET 14 OF 27

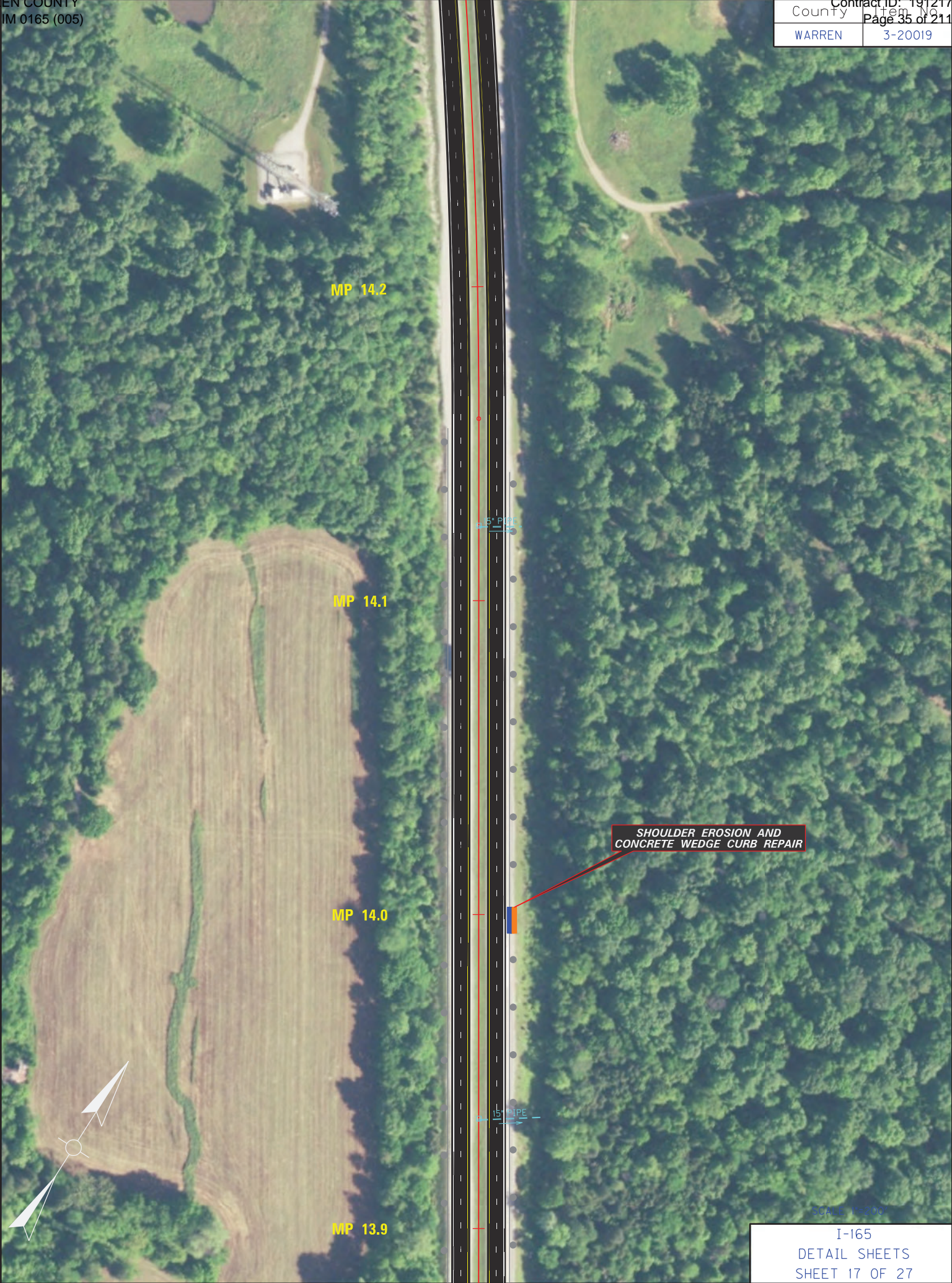


SCM E 1-200



SCALE 1"=200'

I-65
DETAIL SHEETS
SHEET 16 OF 27



MP 14.2

MP 14.1

MP 14.0

MP 13.9

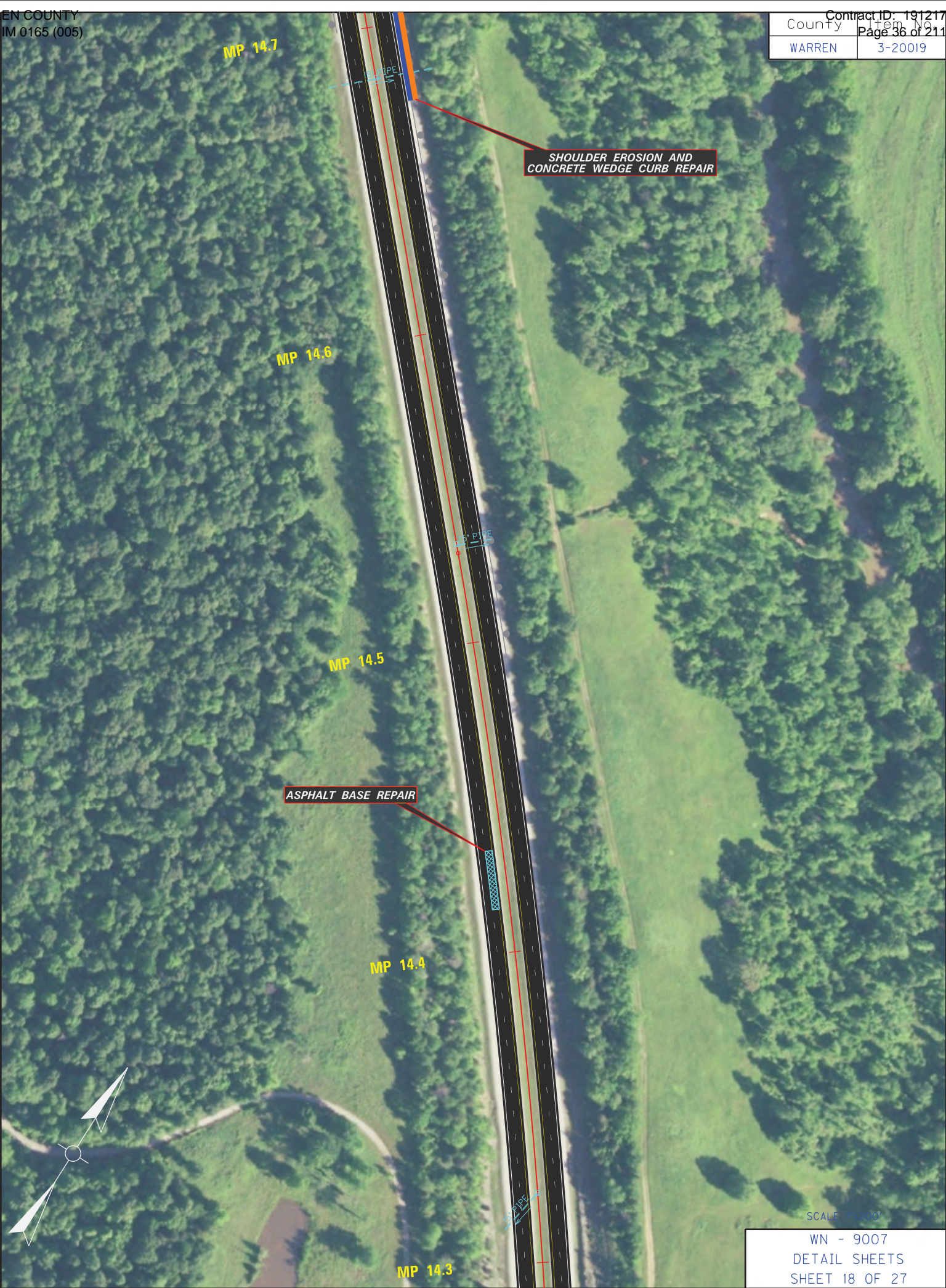
SHOULDER EROSION AND
CONCRETE WEDGE CURB REPAIR

15' PBT

15' IPE

SCALE 1"=100'

I-165
DETAIL SHEETS
SHEET 17 OF 27



SCALE 1"=200'

WN - 9007
DETAIL SHEETS
SHEET 18 OF 27



SCALE 1"=200'



SCALE 1"=200'

I-165
DETAIL SHEETS
SHEET 20 OF 27



SCALE 1"=200'



SCALE 1"=200'

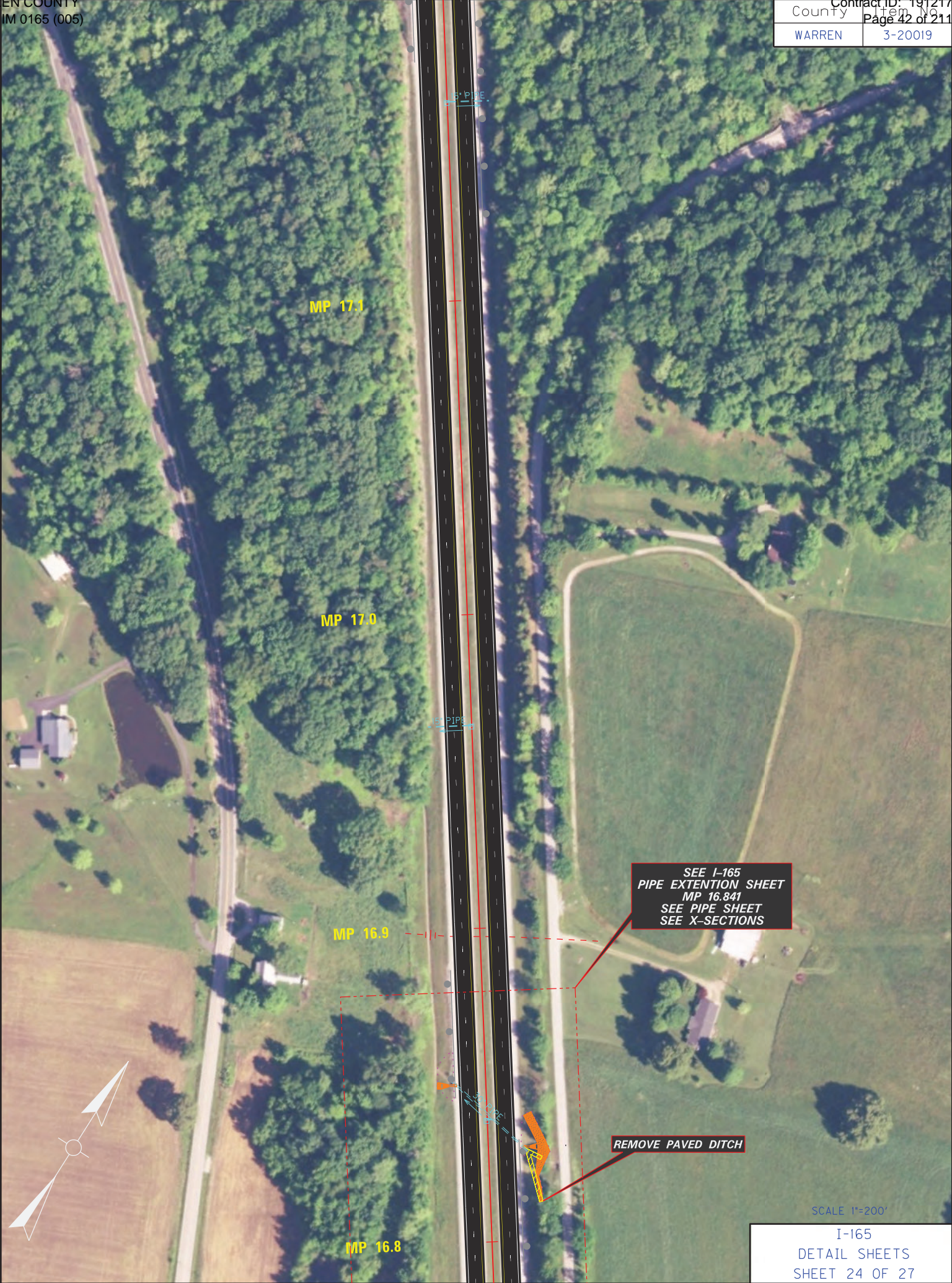


SEE I-165
PIPE EXTENTION SHEET
MP 16.841
SEE PIPE SHEET
SEE X-SECTIONS

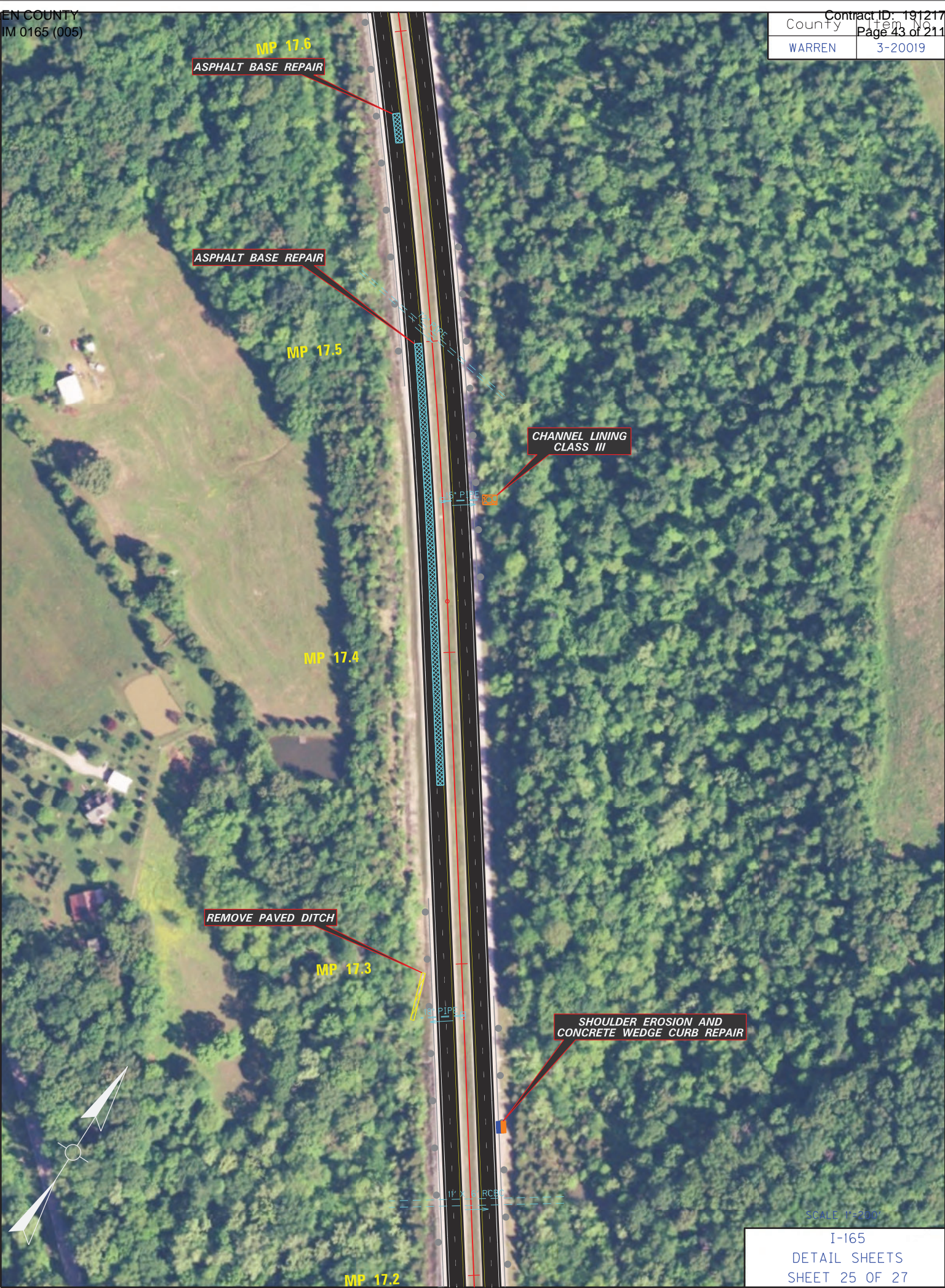
REMOVE 8 LF OF PIPE
PLACE 4 LF OF 18" PIPE
PLACE 1-18" S & F BOX I/O HEADWALL

REMOVE 8 LF OF PIPE
PLACE 4 LF OF 15" PIPE
PLACE 1-15" S & P HEADWALL

SCALE 1"=200'



SCALE 1"=200'



SCALE 1"=200'



SCALE 1"=500'

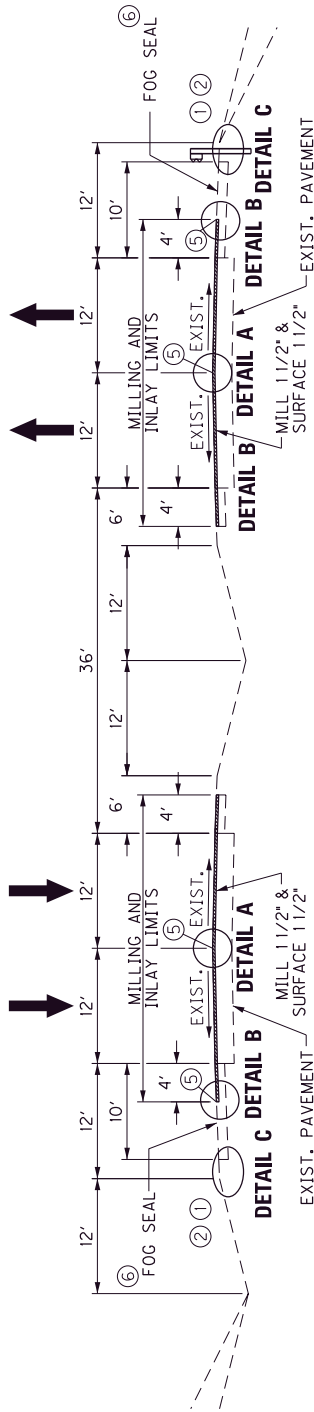


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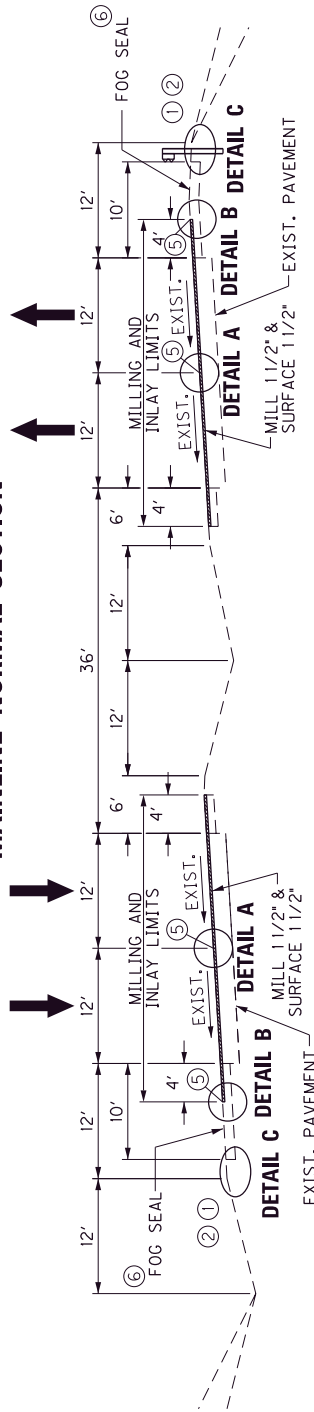
PROPOSED TYPICAL SECTIONS

County	Item No.	Sheet
WARREN	3-20019	

I-165
MP 7.823 SB & 7.842 NB TO MP 18.167 NB & SB



MAINLINE NORMAL SECTION



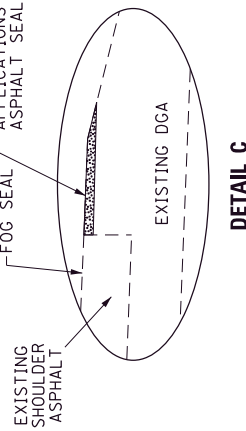
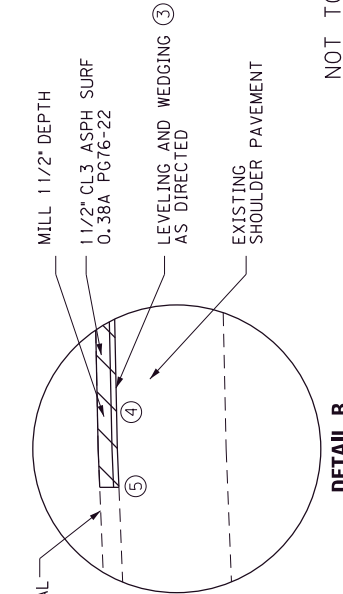
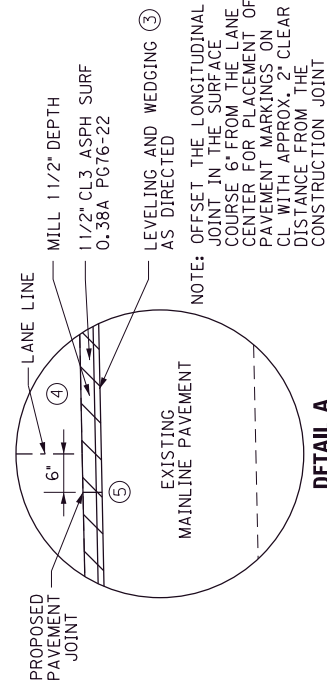
MAINLINE SUPERELEVATED SECTION

SURFACING SCHEDULE

MAINLINE & SHOULDERS

- ① ASPHALT PAVEMENT MILLING AND TEXTURING.....1 1/2" DEPTH
- ③ LEVELING AND WEDGING PG76-22.....AS DIRECTED
- CL3 ASPH SURFACE 0.38A PG76-22.....1 1/2" DEPTH

- ① ASPHALT SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2 FOOT DOWN THE DITCH OR FILL SLOPE (Where Applicable). TWO APPLICATIONS OF THE FOLLOWING :
ASPHALT SEAL COAT 2.4 lbs. / S.Y.
ASPHALT SEAL AGGREGATE 20 lbs. / S.Y.
- ② SHOULDER WIDENED 2' WHERE GUARDRAIL IS PRESENT
- ③ TO BE USED AS DIRECTED BY THE ENGINEER FOR PAVEMENT IRREGULARITIES.
- ④ APPLY ASPHALT MATERIAL FOR TACK AT A RATE OF 0.5LBS/SY BETWEEN EACH LAYER OF ASPH. CONCRETE.
- ⑤ JOINT ADHESIVE
- ⑥ TREAT REMAINING SHOULDER NOT RESURFACED WITH 0.12-0.15# / SY OF ASPHALT EMULSION FOR FOG SEAL.



DETAIL A

DETAIL B

DETAIL C

NOT TO SCALE

I-165
TYPICAL SECTIONS

I-165
WARREN COUNTY
ITEM NO. 3-20019, PAVEMENT REHABILITATION
MP 7.823 SB & 7.842 NB TO MP 18.167 NB & SB
GENERAL SUMMARY

ITEM NUMBER	ITEM	UNIT	QUANTITY
001	DGA BASE ①	TON	2,163
100	ASPHALT SEAL AGGREGATE ①	TON	486
103	ASPHALT SEAL COAT ①	TON	59
194	LEVELING AND WEDGING PG76-22 ①	TON	500
216	CLASS 3 ASPH. BASE 1.00D PG76-22 ①	TON	1,247
336	CLASS 3 ASPH. SURF. 0.38A PG76-22 ①	TON	32,012
2677	ASPHALT PAVE MILLING & TEXTURING ①	TON	33,259
2007IEC	JOINT ADHESIVE ①	LF	218,466
24878EC	ASPHALT EMULSION FOR FOG SEAL ①	TON	95
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING ①	TON	102
2351	GUARDRAIL-STEEL W BEAM-S FACE ②	LF	1,300
2381	REMOVE GUARDRAIL ②	LF	1,925
078	CRUSHED AGGREGATE SIZE NO. 2 ④	TON	555
461	CULVERT PIPE - 15 IN ③	LF	32
462	CULVERT PIPE - 18 IN ③	LF	4
466	CULVERT PIPE - 30 IN ③	LF	22
472	CULVERT PIPE - 60 IN ③	LF	21
1210	PIPE CULVERT HEADWALL - 30 IN ③	EACH	1
1220	PIPE CULVERT HEADWALL - 60 IN ③	EACH	1
1310	REMOVE PIPE ③	LF	102
1443	SLOPED AND PARALLEL HEADWALL - 15 IN ③	EACH	8
1450	S & F BOX INLET - OUTLET - 18 IN ③	EACH	1
1452	S & F BOX INLET - OUTLET - 30 IN ③	EACH	2
1646	JUNCTION BOX - 42 IN ③	EACH	2
1691	FLUME INLET TYPE 2 ③	EACH	3
2165	REMOVE PAVED DITCH ③	SY	1,475
2262	FENCE - WOVEN WIRE TYPE 1 ③	LF	100
2265	REMOVE FENCE ③	LF	100
2469	CLEAN SINKHOLE ③	EACH	2
2484	CHANNEL LINING CLASS III ③	TON	2,204
2599	FABRIC-GEOTEXTILE TYPE IV ③	SY	20
2625	REMOVE HEADWALL ③	EACH	8
22883EN	CONCRETE WEDGE CURB ③	LF	594
24252EC	JUNCTION BOX - 66 IN ③	EACH	1
1984	DELINEATOR FOR BARRIER - WHITE	EACH	24
1985	DELINEATOR FOR BARRIER - YELLOW	EACH	24

- ① CARRIED OVER FROM PAVING SUMMARY
- ② CARRIED OVER FROM GUARDRAIL SUMMARY
- ③ CARRIED OVER FROM PIPE SUMMARY
- ④ 18 TONS FROM PIPE SUMMARY AND 537 TON FROM SHOULDER EROSION DETAIL

I-165

WARREN COUNTY

ITEM NO. 3-20019, PAVEMENT REHABILITATION

MP 7.823 SB & 7.842 NB TO MP 18.167 NB & SB

GENERAL SUMMARY

ITEM NUMBER	ITEM	UNIT	QUANTITY
2003	RELOCATE TEMP CONC BARRIER	LF	1,120
2014	BARRICADE - TYPE III	EACH	8
2562	TEMPORARY SIGNS	SQ FT	800
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	4
2775	ARROW PANEL	EACH	2
2898	RELOCATE CRASH CUSHION	EACH	2
3171	CONCRETE BARRIER WALL TYPE 9T	LF	1,120
6401	FLEXIBLE DELINEATOR POST - M/W	EACH	989
6511	PAVE STRIPING-TEMP PAINT - 6 IN	LF	470,239
6542	PAVE STRIPING-THERMO - 6 IN W	LF	68,270
6543	PAVE STRIPING-THERMO - 6 IN Y	LF	54,617
6549	PAVE STRIPING-TEMP REM TAPE - B	LF	2,775
6550	PAVE STRIPING-TEMP REM TAPE - W	LF	5,100
6551	PAVE STRIPING-TEMP REM TAPE - Y	LF	1,500
6556	PAVE STRIPING-DUR TY 1 - 6 IN W	LF	650
6557	PAVE STRIPING-DUR TY 1 - 6 IN Y	LF	520
6585	PAVEMENT MARKER TY IVA- MW TEMP	EACH	300
8903	CRASH CUSHION TY VI CLASS BT TL3	EACH	2
24489EC	INLAID PAVEMENT MARKER	EACH	1,366
25019EC	GROOVE FOR PAVE STRIPING - 7 IN	LF	122,887
25008EC	PAVE STRIPING-THERMO-6 IN W-WET REFLECT	LF	68,270
25009EC	PAVE STRIPING-THERMO-6 IN Y-WET REFLECT	LF	54,617
2159	TEMP DITCH	LF	5,280
2160	CLEAN TEMP DITCH	LF	2,640
2701	TEMP SILT FENCE	LF	5,280
2703	SILT TRAP TYPE A	EACH	3
2704	SILT TRAP TYPE B	EACH	3
2705	SILT TRAP TYPE C	EACH	3
2706	CLEAN SILT TRAP TYPE A	EACH	3
2707	CLEAN SILT TRAP TYPE B	EACH	3
2708	CLEAN SILT TRAP TYPE C	EACH	3
5950	EROSION CONTROL BLANKET	SY	14,520
5952	TEMP MULCH	SY	9,680
5953	TEMP SEEDING AND PROTECTION	SY	7,260
5963	INITIAL FERTILIZER	TON	1.5
5964	20-10-10 FERTILIZER	TON	0.8
5989	SPECIAL SEEDING CROWN VETCH	SY	1,742
5992	AGRICULTURAL LIMESTONE	TON	9

① CARRIED OVER FROM STRUCTURE ESTIMATE OF QUANITIES & NOTES

I-165

WARREN COUNTY

ITEM NO. 3-20019, PAVEMENT REHABILITATION

MP 7.823 SB & 7.842 NB TO MP 18.167 NB & SB

GENERAL SUMMARY

ITEM NUMBER	ITEM	UNIT	QUANTITY
	BRIDGE OVER GASPER RIVER (I14B00054L)		
2110	PARTIAL DEPTH PATCHING ①	CF	257.5
3299	ARMORED EDGE FOR CONCRETE ①	LF	60
8504	EPOXY SAND SLURRY ①	SY	107
8551	MACHINE PREPARATION OF EXISTING SLAB ①	SY	862.5
8526	CONC. CLASS "M" FULL DEPTH PATCH ①	CY	9
8534	CONCRETE OVERLAY-LATEX ①	CY	36
8549	BLAST CLEANING ①	SY	994
20599EC	CONCRETE BEAM REPAIR ①	SF	8
	BRIDGE OVER GASPER RIVER (I14B00054R)		
2110	PARTIAL DEPTH PATCHING ①	CF	257.5
3299	ARMORED EDGE FOR CONCRETE ①	LF	60
8504	EPOXY SAND SLURRY ①	SY	107
8551	MACHINE PREPARATION OF EXISTING SLAB ①	SY	862.5
8526	CONC. CLASS "M" FULL DEPTH PATCH ①	CY	9
8534	CONCRETE OVERLAY-LATEX ①	CY	36
8549	BLAST CLEANING ①	SY	994
20599EC	CONCRETE BEAM REPAIR ①	SF	8
2568	MOBILIZATION	LS	1
2569	DEMOBILIZATION	LS	1
2575	DITCHING AND SHOULDERING	LF	54,617
2650	MAINTAIN & CONTROL TRAFFIC	LS	1
2676	MOBILIZATION FOR MILL & TEXT	LS	1
2696	SHOULDER RUMBLE STRIPS	LF	218,466
2726	STAKING	LS	1
10020NS	FUEL ADJUSTMENT	DOLL	52,548
10030NS	ASPHALT ADJUSTMENT	DOLL	131,984
2478IEC	INTELLIGENT COMPACTION FOR ASPHALT	TON	33,759
2489IEC	PAVE MOUNT INFRARED TEMP EQUIPMENT	SQ FT	2,621,583
24986EC	HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM	LS	1

① CARRIED OVER FROM STRUCTURE ESTIMATE OF QUANTITIES & NOTES

I-165
WARREN COUNTY
ITEM NO. 3-20019, PAVEMENT REHABILITATION
MP 7.823 SB & 7.842 NB TO MP 18.167 NB & SB

PAVING AREAS		PAVING AREAS	
ITEM	TOTAL	ITEM	TOTAL
MAINLINE	S.Y.	SHOULDERS	S.Y.
1 1/2" ASPHALT PAVE MILLING & TEXTURING	388,019	ASPHALT SEAL AGGREGATE ⑥	24,274
1 1/2" CLASS 3 ASPH. SURF. 0.38A PG76-22	388,019	ASPHALT SEAL COAT ⑥	24,274
		1 1/2" AVG DEPTH DGA BASE (SHOULDER WEDGE) ⑥	24,274
MAINLINE (ASPHALT BASE REPAIR)		APHALT EMULSION FOR FOG SEAL	157,780
4" ASPHALT PAVE MILLING & TEXTURING	5,022		
4" CLASS 3 ASPH. BASE. 1.00D PG76-22	5,022	SHOULDER STRENGTHENING	
		8" ASPHALT PAVE MILLING & TEXTURING	334
		8" CLASS 3 ASPH. BASE. 1.00D PG76-22	334

PAVING SUMMARY			
CODE	ITEM	UNITS	PROJECT TOTAL
2677	ASPHALT PAVE MILLING & TEXTURING ⑤	TON	33,259
336	CLASS 3 ASPH. SURF. 0.38A PG76-22	TON	32,012
001	DGA BASE ⑦	TON	2,163
194	LEVELING AND WEDGING PG76-22 ①	TON	500
100	ASPHALT SEAL AGGREGATE ②	TON	486
103	ASPHALT SEAL COAT ②	TON	59
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING ③	TON	102
24878EC	ASPHALT EMULSION FOR FOG SEAL ④	TON	95
20071EC	JOINT ADHESIVE	LF	218,466
216	CLASS 3 ASPH. BASE. 1.00D PG76-22 ⑤	TON	1,247
	* ALL ITEMS CARRIED TO GENERAL SUMMARY		

① TO BE USED FOR PAVEMENT IRREGULARITIES AS DIRECTED BY THE ENGINEER.
② BASED ON 2 APPLICATIONS OF: 2.4*/SY ASPHALT SEAL, 20*/SY ASPHALT SEAL AGGREGATE.
③ ESTIMATED AT 0.5 LBS/SY, 10% ADDED FOR L/W.
④ APPLICATION RATE ESTIMATED AT 1.2*/SY
⑤ INCLUDES 1,100 TONS FROM ASPHALT BASE REPAIR DETAIL, 147 TONS FROM SHOULDER STRENGTHENING.
⑥ BASED ON 25% OF LENGTH OF SHOLDERS ON PROJECT.
⑦ INCLUDES 69 TONS FROM SHOULDER EROSION REPAIR DETAIL.

CALCULATION OF ALL ASPH. MIXES BASED ON 110*/SY PER IN., STONE BASE CALC. ON 115*/SY PER IN. OR 2.07 TONS/CY.
NOTE: ALL QUANTITIES HAVE BEEN CARRIED OVER AND INCLUDED IN THE GENERAL SUMMARY.

I-165
WARREN COUNTY
PAVEMENT REHABILITATION
ITEM NO. 3-20019
PIPE DRAINAGE SUMMARY

DIRECTION MILEPOINT OR STATION	CULVERT PIPE				HEADWALLS AND DROP BOX INLETS							MISCELLANEOUS										REMARKS		
	CULVERT PIPE - 15 IN	CULVERT PIPE - 18 IN	CULVERT PIPE - 30 IN	CULVERT PIPE - 60 IN	PIPE CULVERT HEADWALL - 30 IN	PIPE CULVERT HEADWALL - 60 IN	S & F BOX INLET - OUTLET - 18 IN	S & F BOX INLET - OUTLET - 30 IN	SLOPED AND PARALLEL HEADWALL - 15 IN	JUNCTION BOX - 42 IN	JUNCTION BOX - 66 IN	REMOVE FENCE	REMOVE HEADWALL	REMOVE PIPE	REMOVE PAVED DITCH	FLUME INLET TYPE 2	CHANNEL LINING CLASS III	CLEAN SINKHOLE 4	CRUSHED AGGREGATE SIZE NO. 2	FENCE - WOVEN WIRE TYPE 1	FABRIC-GEOTEXTILE TYPE IV		CONCRETE WEDGE CURB	
ITEM CODE	461	462	466	472	1210	1220	1450	1452	1443	1646	24252EC	2265	2625	1310	2165	1691	2484	2469	78	2262	2599	22883EN		
UNIT TO BID	LINEAR FEET				EACH								LF.	EACH	LF.	S.Y.	EACH	TONS	EACH	TONS	LF.	S.Y.	LF.	
NB MP 9.445																								
SB MP 9.974															237		177							
SB MP 10.272	4								1				1	8										
NB MP 10.833																	34							
NB MP 10.854																68		51						
NB MP 11.131	4								1				1	4									15" SLOPED AND PARALLEL HW	
SB MP 11.264	4								1					8									15" SLOPED AND PARALLEL HW	
SB MP 11.397	4								1					8									15" SLOPED AND PARALLEL HW	
SB MP 11.779			4		1								1	4			34						30" SLOPED AND FLARED HW	
SB MP 12.248				21		1					1		1	10			90						60" SLOPED AND FLARED HW	
NB MP 12.756																	16							
NB MP 13.206															12		9							
NB MP 13.252																	16							
NB MP 14.843																	16							
NB MP 15.005	4								1				1	8									15" SLOPED AND PARALLEL HW	
SHEET TOTALS	20	0	4	21	1	1	0	0	5	0	1	0	5	50	975	0	937	0	0	0	0	0	0	

- ① MATCH EXISTING PIPE MATERIAL TYPE.
- ② THE CONTRACTOR SHALL FIELD VERIFY TYPES AND DIMENSIONS PRIOR TO ORDERING PIPE, FRAMES & GRATES.
- ③ TO BE USED AS DIRECTED BY THE ENGINEER AT INLETS, OUTLETS, AND DITCHES FOR EROSION PROTECTION.
- ④ CARRIED OVER FROM CLEAN SINKHOLE DETAIL.

I-165
WARREN COUNTY
PAVEMENT REHABILITATION
ITEM NO. 3-20019
PIPE DRAINAGE SUMMARY

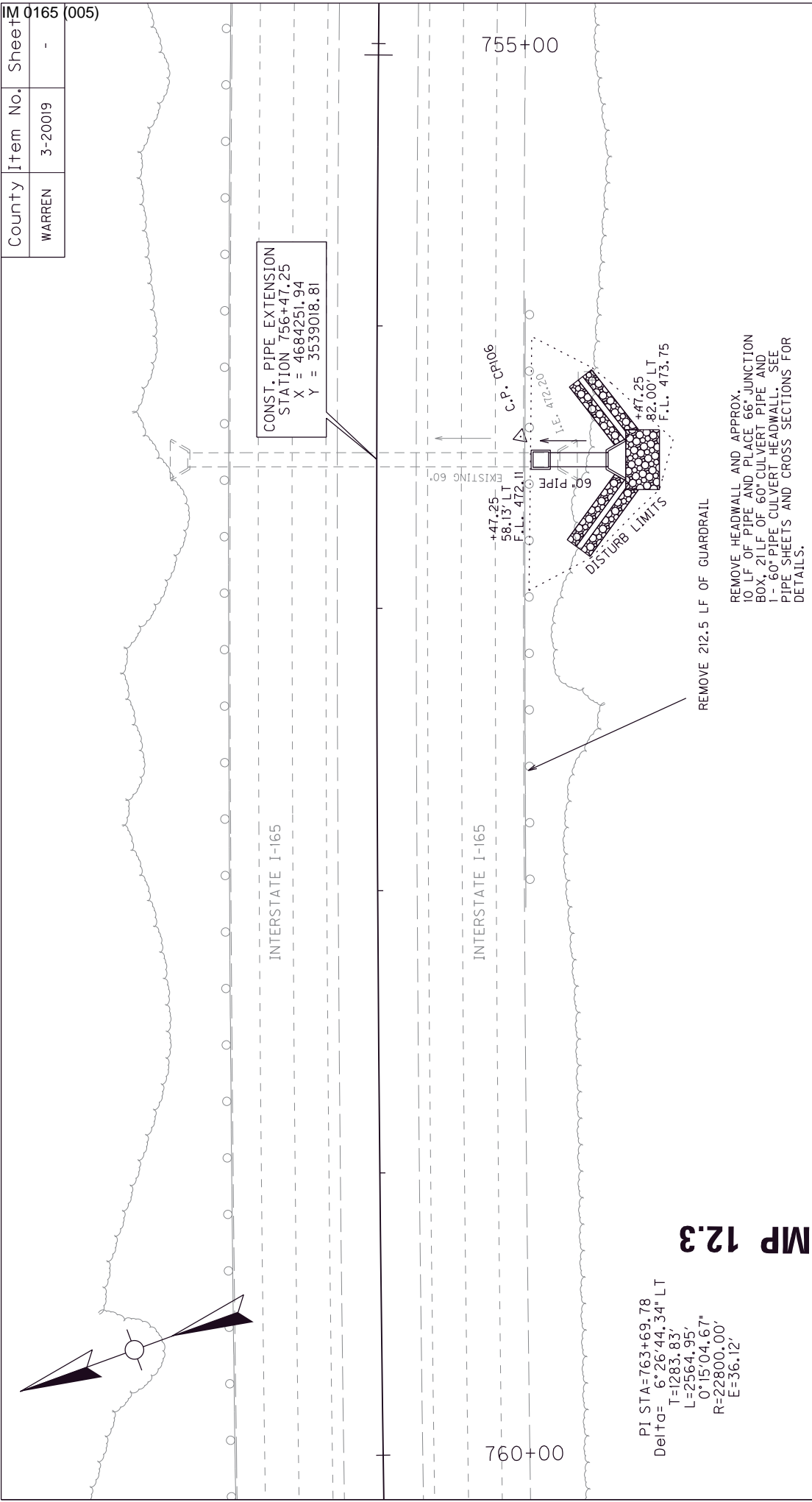
DIRECTION MILEPOINT OR STATION	CULVERT PIPE				HEADWALLS AND DROP BOX INLETS										MISCELLANEOUS								REMARKS
	CULVERT PIPE - 15 IN	CULVERT PIPE - 18 IN	CULVERT PIPE - 30 IN	CULVERT PIPE - 60 IN	PIPE CULVERT HEADWALL - 30 IN	PIPE CULVERT HEADWALL - 60 IN	S & F BOX INLET - OUTLET - 18 IN	S & F BOX INLET - OUTLET - 30 IN	SLOPED AND PARALLEL HEADWALL - 15 IN	JUNCTION BOX - 42 IN	JUNCTION BOX - 66 IN	REMOVE FENCE	REMOVE HEADWALL	REMOVE PIPE	REMOVE PAVED DITCH	FLUME INLET TYPE 2	CHANNEL LINING CLASS III	CLEAN SINKHOLE	CRUSHED AGGREGATE SIZE NO. 2	FENCE - WOVEN WIRE TYPE 1	FABRIC-GEOTEXTILE TYPE IV	CONCRETE WEDGE CURB	
ITEM CODE	461	462	466	472	1210	1220	1450	1452	1443	1646	24252EC	2265	2625	1310	2165	1691	2484	2469	78	2262	2599	22883EN	
UNIT TO BID	LINEAR FEET				EACH							L.F.	EACH	L.F.	S.Y.	EACH	TONS	EACH	TONS	L.F.	S.Y.	L.F.	
NB MP 15.384																		1	9		10		SINKHOLE DETAIL
SB MP 15.447																		1	9		10		SINKHOLE DETAIL
SB MP 15.629															140								
NB MP 15.676															22		16						
SB MP 15.726															164		123						
NB MP 16.063	4								1					8									15" SLOPED AND PARALLEL HW
NB MP 16.463	4								1					8									15" SLOPED AND PARALLEL HW
SB MP 16.661		4					1							8									18" S&F BOX I/O
NB MP 16.821															77		58						
NB & SB 16.860			18					2		2		100	2	20			208			100			PIPE DRAINAGE SHEET STA 999+97.12
SB MP 17.289															55		41						
NB MP 17.448																	34						
NB MP 17.611	4								1				1	8									15" SLOPED AND PARALLEL HW
SB MP 18.151															42		32						
SHEET TOTALS	12	4	18	0	0	0	1	2	3	2	0	100	3	52	500	0	617	2	18	100	20	0	

- ① MATCH EXISTING PIPE MATERIAL TYPE
- ② THE CONTRACTOR SHALL FIELD VERIFY TYPES AND DIMENSIONS PRIOR TO ORDERING PIPE, FRAMES & GRATES.
- ③ TO BE USED AS DIRECTED BY THE ENGINEER AT INLETS, OUTLETS, AND DITCHES FOR EROSION PROTECTION.
- ④ CARRIED OVER FROM CLEAN SINKHOLE DETAIL.

I-165

DIRECTION MILEPOINT OR STATION	CULVERT PIPE				HEADWALLS AND DROP BOX INLETS							MISCELLANEOUS										REMARKS
	CULVERT PIPE - 15 IN	CULVERT PIPE - 18 IN	CULVERT PIPE - 30 IN	CULVERT PIPE - 60 IN	PIPE CULVERT HEADWALL - 30 IN	PIPE CULVERT HEADWALL - 60 IN	S & F BOX INLET - OUTLET - 18 IN	S & F BOX INLET - OUTLET - 30 IN	SLOPED AND PARALLEL HEADWALL - 15 IN	JUNCTION BOX - 42 IN	JUNCTION BOX - 66 IN	REMOVE FENCE	REMOVE HEADWALL	REMOVE PIPE	REMOVE PAVED DITCH	FLUME INLET TYPE 2	CHANNEL LINING CLASS III	CLEAN SINKHOLE	CRUSHED AGGREGATE SIZE NO. 2	FENCE - WOVEN WIRE TYPE 1	FABRIC-GEOTEXTILE TYPE IV	
ITEM CODE	461	462	466	472	1210	1220	1450	1452	1443	1646	24252EC	2265	2625	1310	2165	1691	2484	2469	78	2262	2599	22883EN
UNIT TO BID	LINEAR FEET				EACH							L.F.	EACH	L.F.	S.Y.	EACH	TONS	EACH	TONS	L.F.	S.Y.	L.F.
SEE CURB WEDGE DETAIL																3	500 ³					TO BE USED AS DIRECTED
																	150					CONCRETE WEDGE CURB DETAIL

- ① MATCH EXISTING PIPE MATERIAL TYPE
- ② THE CONTRACTOR SHALL FIELD VERIFY TYPES AND DIMENSIONS PRIOR TO ORDERING PIPE, FRAMES & GRATES.
- ③ TO BE USED AS DIRECTED BY THE ENGINEER
- ④ AT INLETS, OUTLETS, AND DITCHES FOR EROSION PROTECTION. CARRIED OVER FROM CLEAN SINKHOLE DETAIL.



COORDINATE CONTROL POINTS					
POINT	DESCRIPTION	State Plane Coordinates			OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
106	IRON PIN AND CAP	3538968.138	4684242.101	481.279	756 + 39.09
107	IRON PIN AND CAP	3538802.309	4684680.772	500.138	751 + 69.06

PROPOSED MAINLINE ALIGNMENT			
POINT	STATION	NORTHING (Y)	EASTING (X)
P.O.T.	750 + 00	3538788.3394	4684856.7484
P.I.	763 + 69.78	3539289.7425	4683582.0320
P.O.T.	780 + 00	3539713.0982	4682004.9417

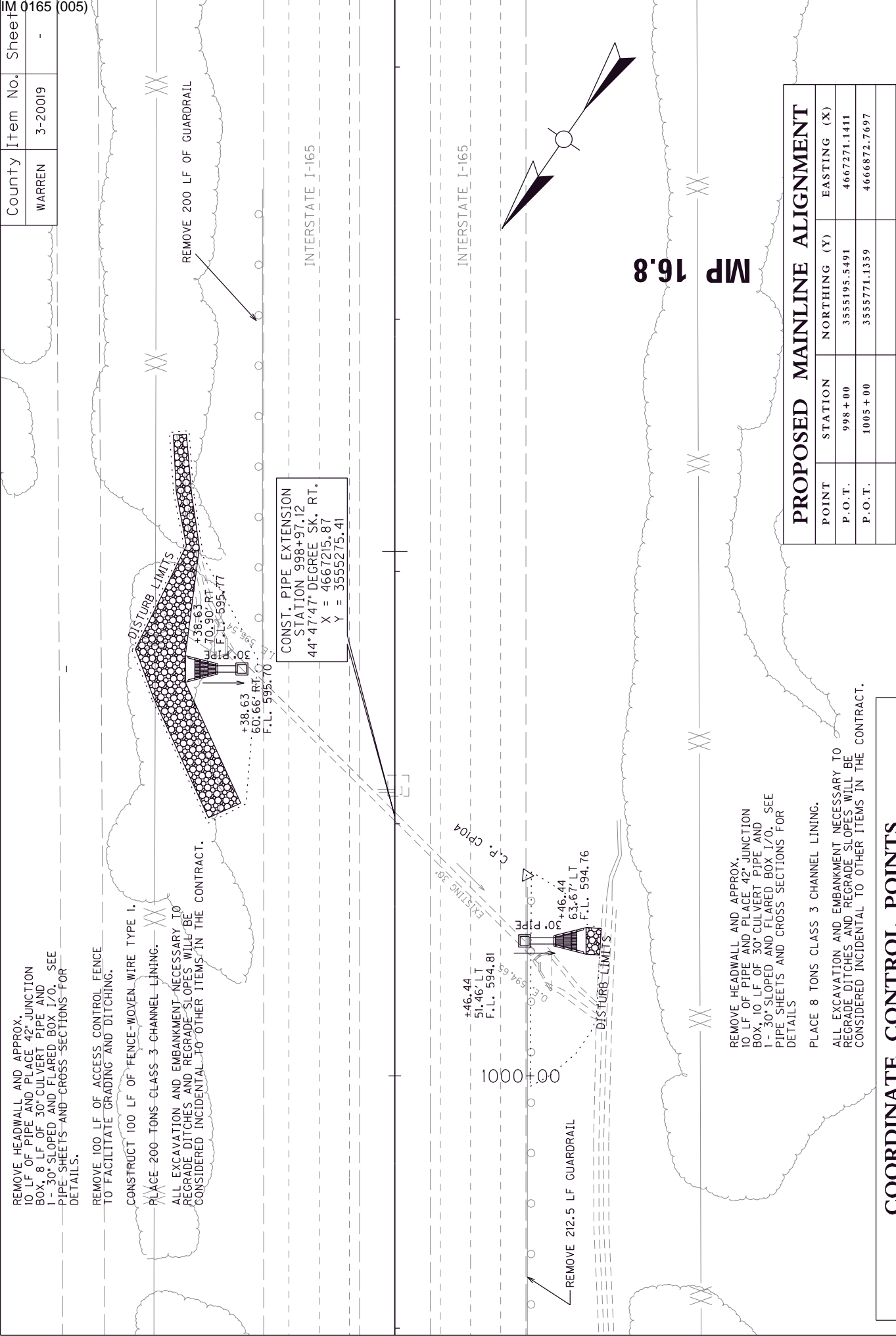
REMOVE HEADWALL AND APPROX.
10 LF OF PIPE AND PLACE 66" JUNCTION
BOX, 21 LF OF 60" CULVERT PIPE AND
1 - 60" PIPE CULVERT HEADWALL. SEE
PIPE SHEETS AND CROSS SECTIONS FOR
DETAILS.

CONSTRUCT 90 TONS CLASS 3 CHANNEL LINING.
ALL EXCAVATION AND EMBANKMENT NECESSARY TO
REGRADE DITCHES AND REGRADE SLOPES WILL BE
CONSIDERED INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.



SCALE 1" = 50'

I-165
PIPE EXTENSION
MP 12.248



PROPOSED MAINLINE ALIGNMENT			
POINT	STATION	NORTHING (Y)	EASTING (X)
P.O.T.	998 + 00	3555195.5491	4667271.1411
P.O.T.	1005 + 00	3555771.1359	4666872.7697

POINT	DESCRIPTION	State Plane Coordinates			STATION	OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)		
104	IRON PIN AND CAP	3555264.853	4667159.665	600.922	999 + 20.43	52.22' LT
105	IRON PIN AND CAP	3554973.567	4667361.786	609.454	995 + 65.89	51.80' LT

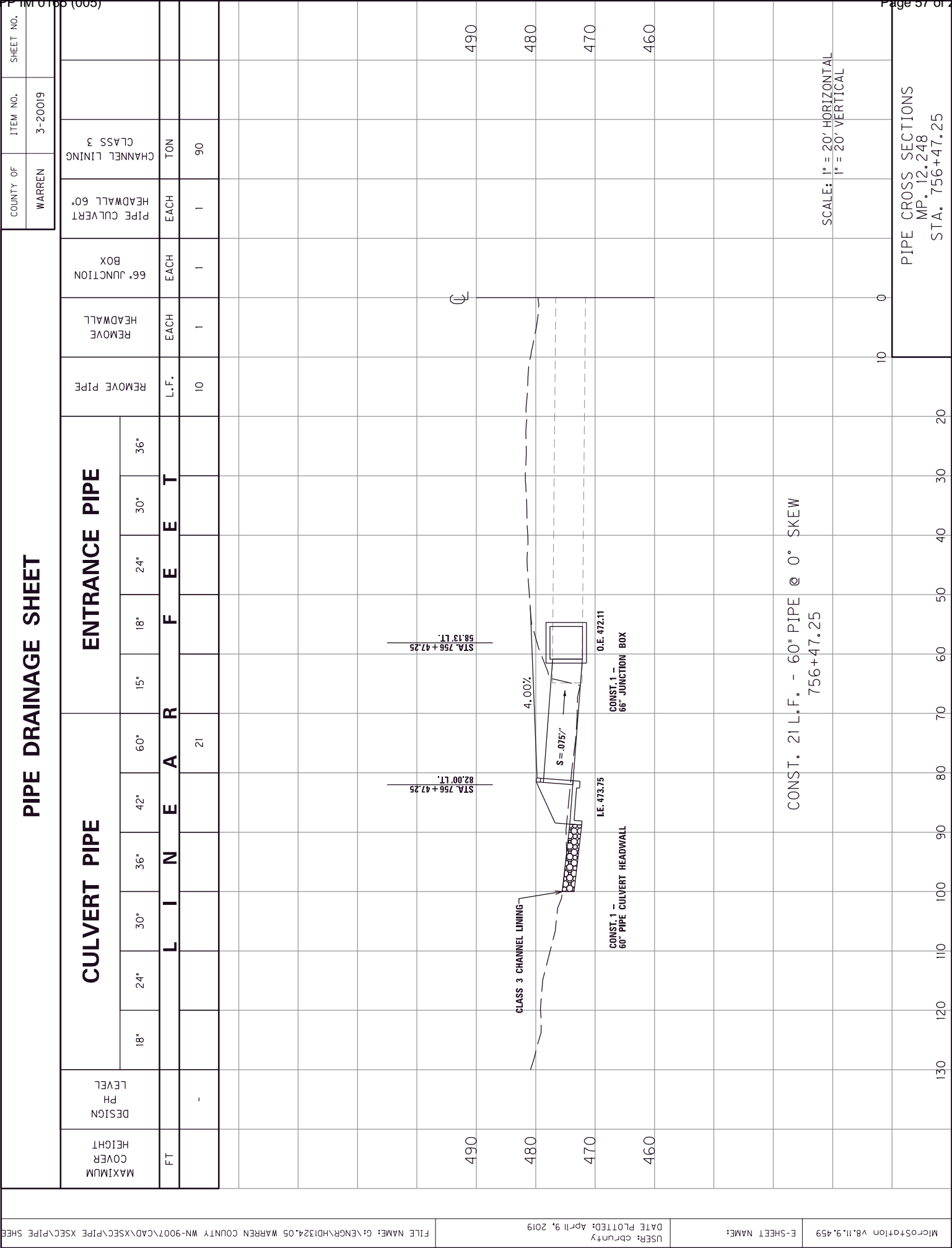
SCALE 1" = 50'

0'

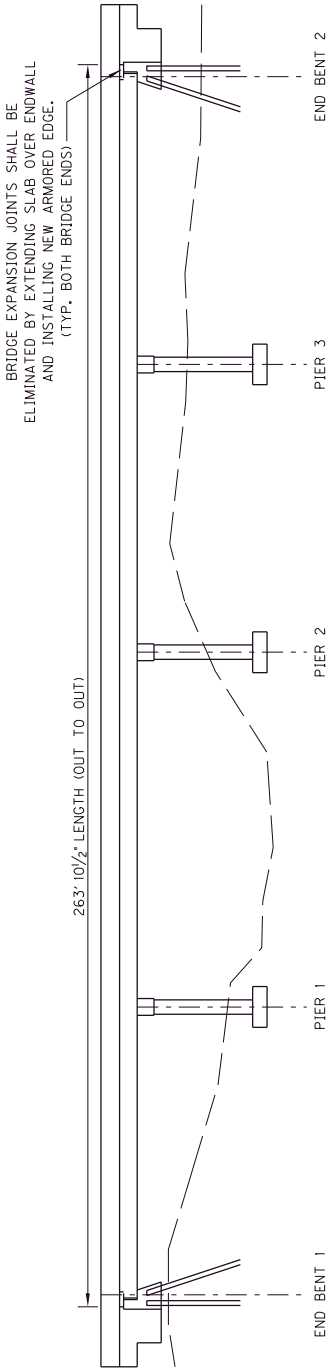
50'

100'

I-165
PIPE EXTENSION
MP 16.841

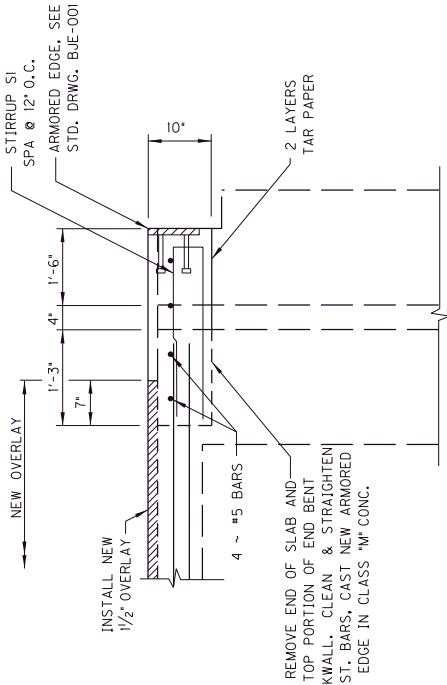


BRIDGE OVER GASPER RIVER
114B00054L
114B00054R



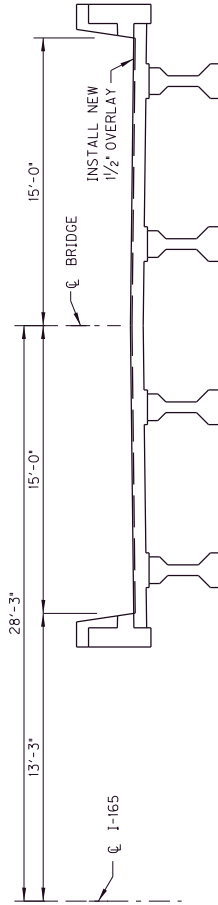
ELEVATION

TWIN 60'-0" ~ 74'-0" ~ 60'-0" ~ 60'-0", PC/B SPANS
EXISTING BRIDGE DRAWING NUMBER 18151



ARMORED EDGE @ END BENTS

(EXTEND SLAB OVER END BENT BACKWALL TO ELIMINATE JOINT)



TYPICAL SECTION

(NORTHBOUND)

REVISION	DATE
MARCH 2019	DESIGNED BY:
CHECKED BY:	DATE:
DETAILED BY:	DATE:
Commonwealth of Kentucky	
COUNTY	
WARREN	
ROUTE	
I-165 over GASPER RIVER	
BRIDGE OVERLAY DETAILS	
PREPARED BY	
HMB PROFESSIONAL	
ENGINEERS, INC.	

ITEM NUMBER	3-20019.00
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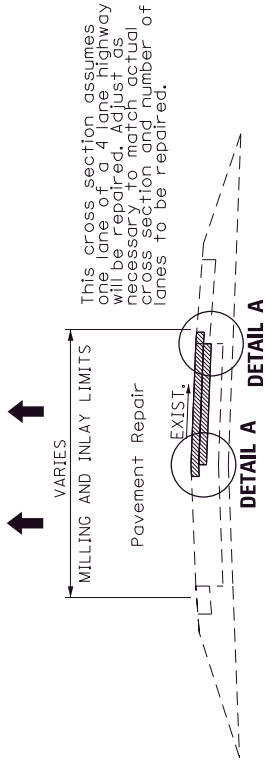
114B	114B
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County	Item No.	Sheet
WARREN	3-20019	

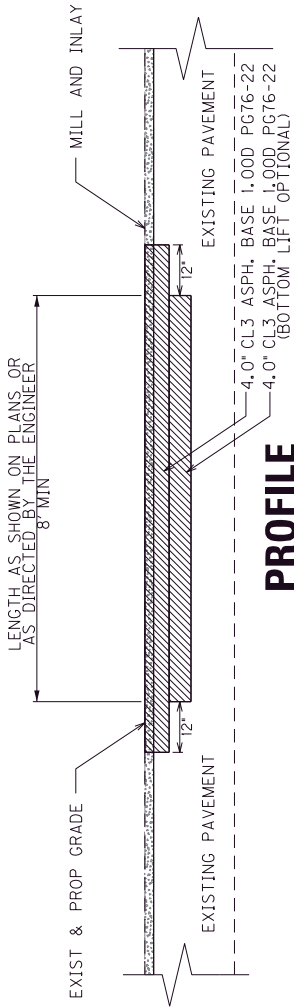
I-165

ASPHALT BASE REPAIR DETAIL

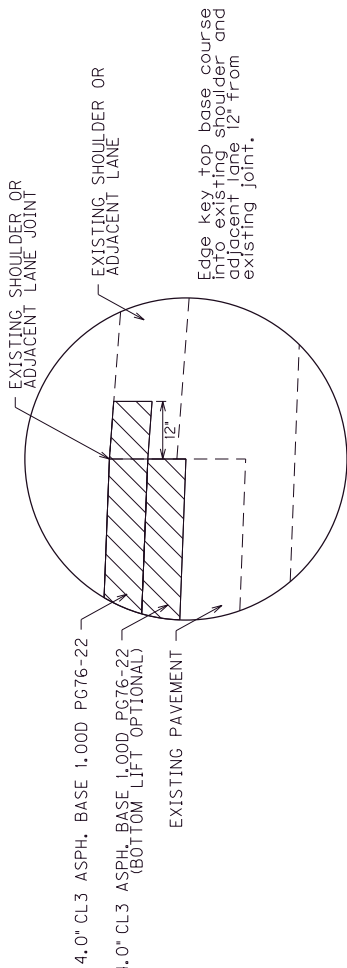
WARREN COUNTY



CROSS SECTION



PROFILE



PLAN VIEW

DETAIL A

BID ITEM

NOTES

- Caution: Existing concrete pavement may exist below the asphalt pavement.
- Pavement repairs shall be performed at locations selected by and as directed by the Engineer. The Engineer will assess, select, and mark areas for treatment. The full lane width will be removed and replaced. The Engineer may elect to perform repairs on one lane or multiple lanes. The Engineer may elect to only remove and replace the top lift of base. An edge key 12" into existing pavement is required for the top course of base. For estimate purposes, quantities were estimated based on 4.5 thicknesses with additional quantity added to be used on an increase of 50% to be used for additional depth repairs or additional locations.
- Complete pavement repair operations in one continuous operation or protect with barrier wall. Do not leave an unprotected hole with no workers present. If barrier wall must be used for pavement repairs, it will be considered incidental to other items of work and not be considered for payment.
- Before resurfacing, open repaired area to traffic for a minimum of 14 days. Monitor pavement for settlement during this 14+ days and repair by leveling and wedging, as approved by the Engineer, until placement of final surface course.
- The item ASPHALT PAVE MILLING AND TEXTURING includes removal of all asphalt to the required depth.
- Perform typical mill and inlay operations with resurfacing items subject to payment as part of the resurfacing operation.

2677
216

ASPHALT PAVE MILLING AND TEXTURING
CL3 ASPH BASE 1,000 PG76-22

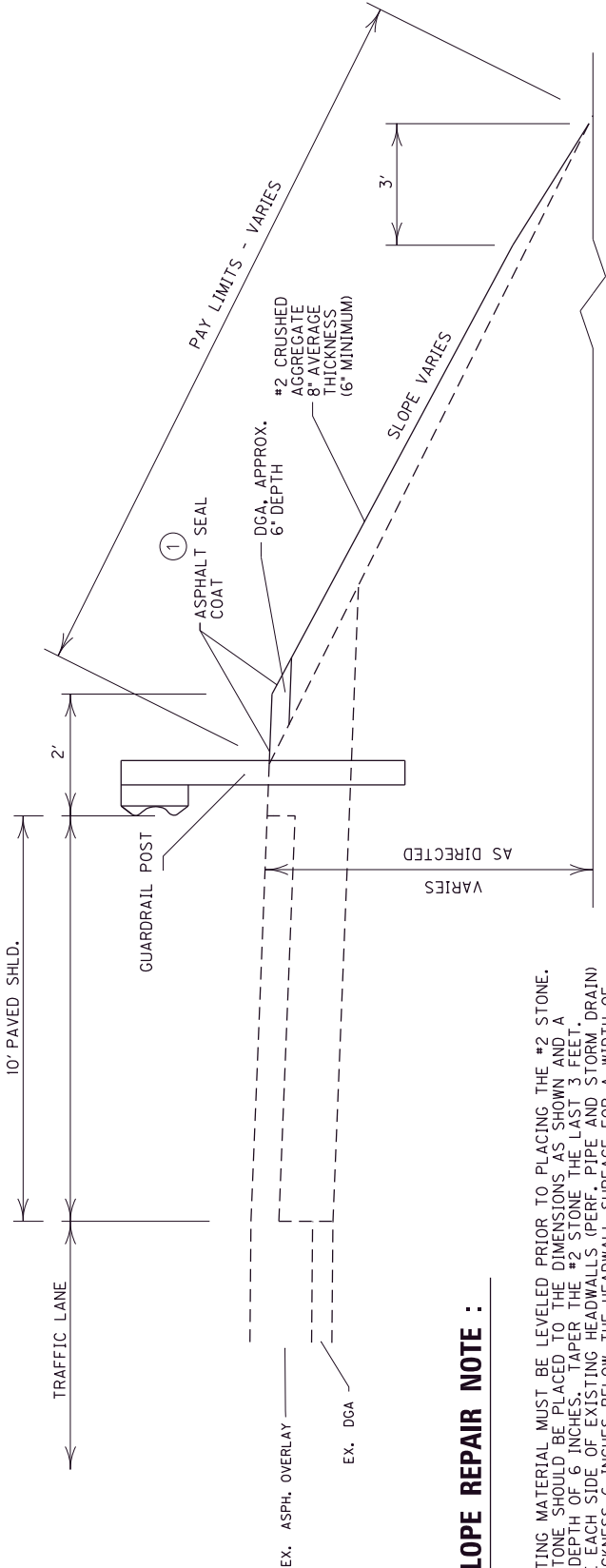
1,100 TONS
1,100 TONS

• Only items listed will be considered for payment and will considered full items of work. If other items of work are listed for payment, they will be considered incidental to other items of work.

Asph base course class and binder grade to be chosen by designer based on current asphalt warrants and/or to remain consistent with mainline asphalt surface used on the project.

NOT TO SCALE

SHOULDER EROSION REPAIR DETAIL



SLOPE REPAIR NOTE :

THE EXISTING MATERIAL MUST BE LEVELED PRIOR TO PLACING THE #2 STONE. THE #2 STONE SHOULD BE PLACED TO THE DIMENSIONS AS SHOWN AND A MINIMUM DEPTH OF 6 INCHES. TAPER THE #2 STONE THE LAST 3 FEET. EXCAVATE EACH SIDE OF EXISTING HEADWALLS (PERF. PIPE AND STORM DRAIN) TO A THICKNESS 6 INCHES BELOW THE HEADWALL SURFACE FOR A WIDTH OF 5 FEET EACH SIDE OF THE HEADWALL AND BLEND #2 STONE TO THE HEADWALL WINGS. DISPOSE OF EXCESS MATERIAL OFF THE PROJECT.

THE BID ITEM *CRUSHED AGGREGATE SIZE NO. 2* INCLUDES ALL LABOR AND EQUIPMENT NECESSARY TO GRADE THE EXISTING SLOPE AND CAP THE SLOPE WITH A MINIMUM OF 6 INCHES OF #2 STONE.

EXTEND THE REPAIRS ONLY THROUGH THE WASH AREA. DO NOT DISTURB AREAS WITH ESTABLISHED VEGETATION.

REMOVE GUARDRAIL WHERE NECESSARY TO PERFORM SHOULDER REPAIRS. PIN ENDS DOWN TO ELIMINATE EXPOSURE TO BLUNT ENDS AND PLACE TRAFFIC DRUMS ON SHOULDER AT 20' SPACING UNTIL GUARDRAIL IS RE-ESTABLISHED. QUANTITIES HAVE BEEN ESTABLISHED FOR PAYMENT OF GUARDRAIL REMOVAL AND INSTALLATION OF NEW RAIL FOR AREAS NOT RECEIVING NEW GUARDRAIL DUE TO DAMAGE.

LOCATIONS:

	BEGIN MP	END MP	LENGTH	CRUSHED AGG.	GUARDRAIL
MAINLINE SB	10.784	10.791	37'	18	37.5'
MAINLINE NB	10.836	10.840	20'	10	25'
MAINLINE NB	12.039	12.175	719'	346	725'
MAINLINE NB	13.994	14.002	44'	22	50'
MAINLINE NB	14.675	14.708	176'	85	187.5'
MAINLINE SB	14.786	14.790	20'	10	25'
MAINLINE SB	15.757	15.771	74'	36	75'
MAINLINE NB	17.245	17.249	20'	10	25'
TOTAL:			1110'	537	1150'

BID ITEM

* 0078	CRUSHED AGGREGATE NO. 2	537 TONS
** 2381	REMOVE GUARDRAIL	1150 LF
** 2351	GUARDRAIL STEEL W BEAM-S FACE	1150 LF
** 0001	DGA BASE	69 TONS

ASPHALT SEAL COAT QUANTITIES ESTABLISHED IN THE PAVING SUMMARY

- ① ASPHALT SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2 FOOT DOWN THE DITCH OR FILL SLOPE OR BOTTOM OF DGA LAYER. TWO APPLICATIONS OF THE FOLLOWING :
ASPHALT SEAL COAT..... 2.4 lbs. / S.Y.
ASPHALT SEAL AGGREGATE 20 lbs. / S.Y.

THE ENGINEER MAY INCLUDE ADDITIONAL LOCATIONS AND ADDITIONAL QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

* (CARRIED ON GENERAL SUMMARY)
** (CARRIED ON GUARDRAIL SUMMARY)

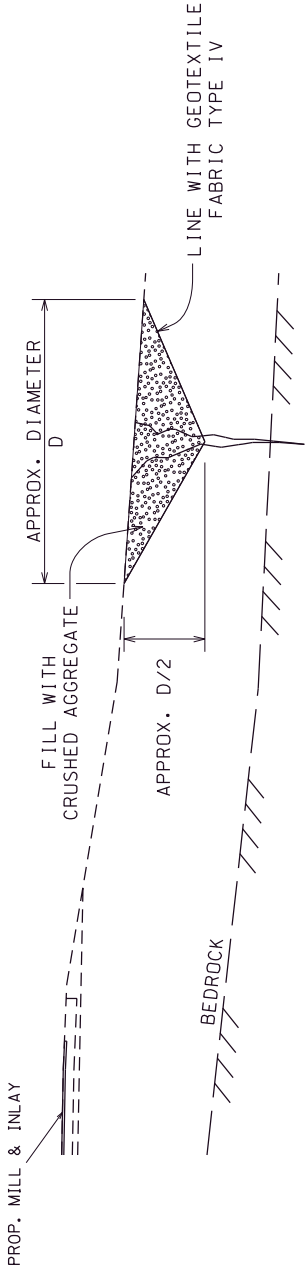
NOT TO SCALE

SINKHOLE DETAIL

I-165

WARREN COUNTY

COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	



SINKHOLE NOTE :

CLEAN SINKHOLES

MULTIPLE SINKHOLES HAVE BEEN ENCOUNTERED AND IDENTIFIED ON THE RIGHT OF WAY WITHIN THE PROJECT LIMITS. PAY ITEMS HAVE BEEN CREATED TO ADDRESS SINKHOLES WHERE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL DETERMINE IN THE FIELD WHICH SINKHOLES WILL BE TREATED AND WHICH SINKHOLES TO NOT DISTURB.

THE INTENT OF TREATMENT IS NOT TO PLUG THE SINKHOLE OR RESTRICT ITS ABILITY TO ACCEPT SURFACE WATER, BUT IS TO CLEAN DEBRIS FROM THE INLET, REMOVE ENOUGH OVERBURDEN TO INSTALL A PLUG OF GRANULAR MATERIAL TO ELIMINATE OR REDUCE THE POSSIBILITY OF DEVELOPMENT OF A LARGE OPEN HOLE.

SUGGESTED LOCATIONS OF SINKHOLES TO BE TREATED ARE LISTED. SUGGESTED DIAMETERS OF EXCAVATION AND REFILL ARE LISTED. THE ENGINEER WILL ASSESS THE NEED FOR TREATMENT AND MAY MODIFY, DELETE OR ADD TREATMENT AT ANY LOCATION WITHIN THE PROJECT LIMITS OR MAY MODIFY THE AMOUNT OF EXCAVATION AND BACKFILL REQUIRED BASED ON ACTUAL FIELD CONDITIONS.

CLEAN SINKHOLE EXCAVATE SOIL, ROCK, VEGETATION OR OTHER DEBRIS FROM THE INLET IN A CONICAL SHAPE AS DETAILED TO THE APPROXIMATE DIAMETER AND DEPTHS DETAILED OR AS DIRECTED BY THE ENGINEER. PAYMENT FOR CLEAN SINKHOLE WILL INCLUDE ALL EXCAVATION OF SOIL, ROCK OR DEBRIS AND DISPOSAL OFF THE PROJECT LIMITS.

GEOTEXTILE FABRIC PLACE GEOTEXTILE FABRIC AT THE INTERFACE OF THE EXCAVATED SURFACE AND THE GRANULAR BACKFILL.

CRUSHED AGGREGATE #2 BACKFILL THE SINKHOLE EXCAVATION AREA WITH #2 CRUSHED AGGREGATE LEVEL WITH SURROUNDING GROUND ELEVATION.

PAYMENT FOR THE ITEMS "CLEAN SINKHOLE", "GEOTEXTILE FABRIC TYPE 4", AND "CRUSHED AGGREGATE SIZE NO. 2" WILL BE FULL COMPENSATION FOR ALL WORK REQUIRED TO CLEAN SINKHOLES AND CAP WITH NO. 2 STONE. NO DIRECT PAYMENT WILL BE MADE FOR CLEARING AND GRUBBING, DISPOSAL OF WASTE OR ANY OTHER ITEMS OF WORK REQUIRED TO COMPLETE THE SINKHOLE CLEANING OPERATION.

MILE POST	DIRECTION	APPROX. DIA.	CLEAN SINKHOLE	AGGREGATE (TONS)	FABRIC (SY)
15.384	NB	10	1	9	10
15.447	SB	10	1	9	10

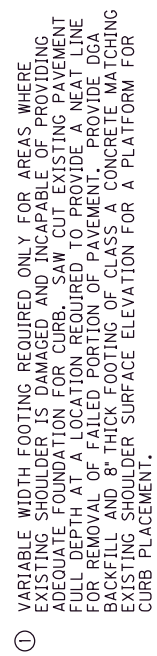
QUANTITIES*			
CLEAN SINKHOLE	CRUSHED AGG.	GEOT. FABRIC	
2 EA.	18 TONS	20 SY	

*(CARRIED ON PIPE SUMMARY)

NOT TO SCALE

CONCRETE WEDGE CURB DETAIL I-165

I-165
PAVEMENT REHABILITATION
CONC. WEDGE CURB DETAILS



ALL REINFORCEMENT INCIDENTAL TO CURB PER LINEAR FOOT. PLACE ONE #4 BAR LONGITUDINALLY. PLACE VERTICAL #4 DOWELS ON 12" CENTERS.

SAW CUT, PAVEMENT REMOVAL, AND CLASS A CONCRETE FOOTING WILL BE CONSIDERED INCIDENTAL TO THE PER LINEAR FOOT UNIT PRICE FOR "CONCRETE WEDGE CURB". DGA WILL BE PAID FOR PER THE SPECIFICATIONS.

CONCRETE FOOTING WILL ONLY BE REQUIRED IN LOCATIONS OF SHOULDER DAMAGE RESULTING IN INADEQUATE FOUNDATION FOR CURB. FOR SOUND SHOULDER LOCATIONS, PLACE CURB ON EXISTING ASPHALT SHOULDER PAVEMENT. PLACE 12" DOWELS ON 12" CENTERS INTO EXISTING SHOULDER ASPHALT IF CURB IS PLACED ON EXISTING ASPHALT.

LOCATIONS:

	BEGIN MP	END MP	LENGTH	GUARDRAIL	FLUME	CHANNEL LINING
MAINLINE SB	10.784	10.791	37'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	10.836	10.840	20'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	12.039	12.048	48'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	12.135	12.148	66'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	12.164	12.175	59'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	13.994	14.002	44'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	14.675	14.708	176'	SEE SHOULDER EROSION DETAIL		
MAINLINE SB	14.753	14.759	10'	50'	FLUME TY 2	50 TON
MAINLINE SB	14.786	14.790	20'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	14.889	14.895	10'	50'	FLUME TY 2	50 TON
MAINLINE SB	15.757	15.771	74'	SEE SHOULDER EROSION DETAIL		
MAINLINE NB	15.789	15.795	10'	50'	FLUME TY 2	50 TON
MAINLINE NB	17.245	17.249	20'	SEE SHOULDER EROSION DETAIL		
TOTAL:			594'	150'	3	150 TON

* 22883EN	CONCRETE WEDGE CURB	594 LF
* 2381	REMOVE GUARDRAIL	150 LF
* **	GUARDRAIL STEEL W BEAM-S FACE	150 LF
* 1691	FLUME INLET TYPE 2	3 EACH
* 2484	CHANNEL LINING CLASS 3	150 TON

** (CARRIED ON PIPE SUMMARY)
 ** (CARRIED ON GUARDRAIL SUMMARY)
 NOT TO SCALE

I-165
PAVEMENT REHA
CONC. WEDGE C

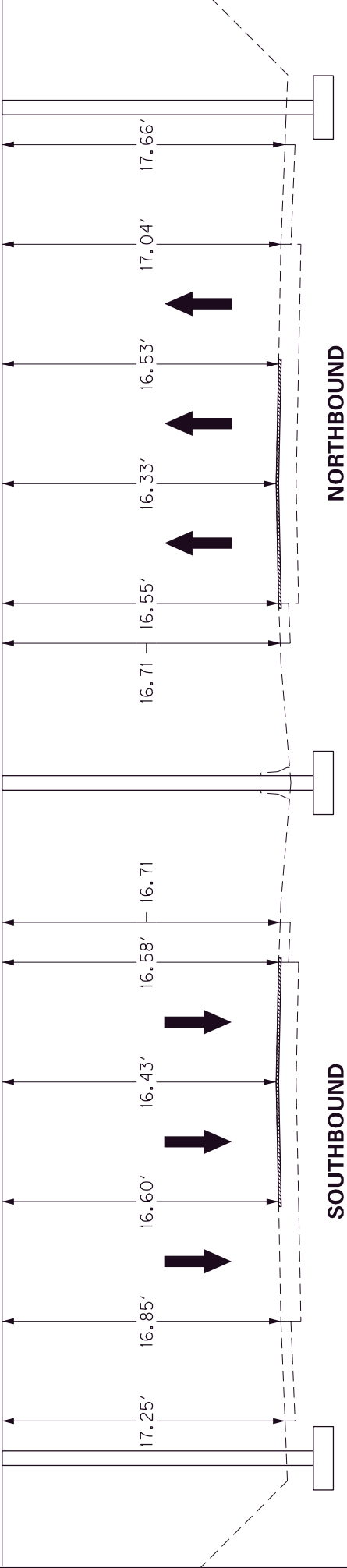
COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	

EXISTING VERTICAL CLEARANCE DETAIL

US 231 (MORGANTOWN ROAD) OVERPASS

M.P. 7.444

EXIST. US 231 (MORGANTOWN ROAD) OVER I-165



*NO ACTION NEEDED

NOT TO SCALE

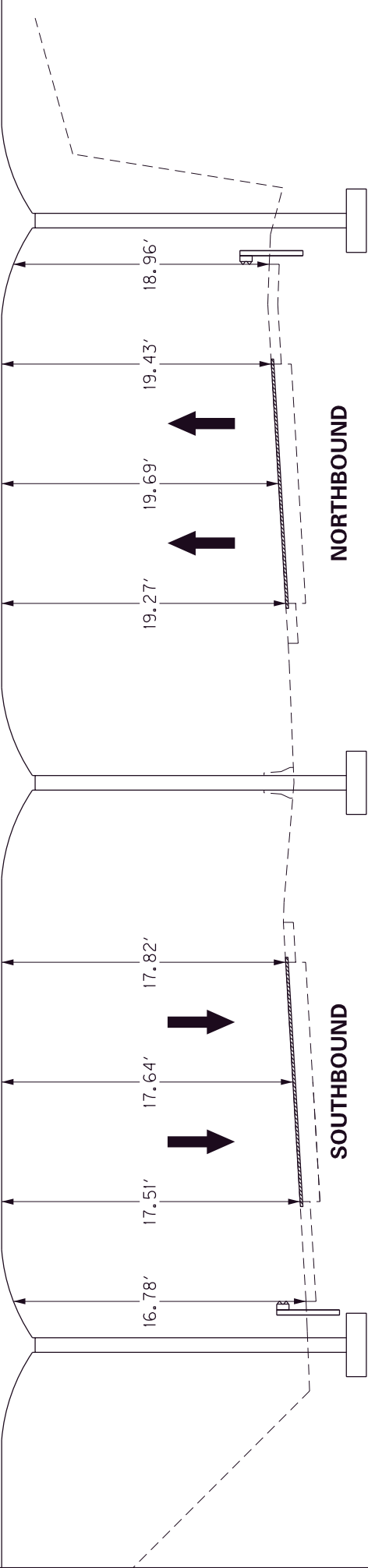
I-165
VERTICAL CLEARANCE

COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	

EXISTING VERTICAL CLEARANCE DETAIL

KY 2665 (GLEN LILY ROAD) OVERPASS
M.P. 8.141

EXIST. KY 2665 (GLEN LILY ROAD) OVER I-165



*NO ACTION NEEDED

NOT TO SCALE

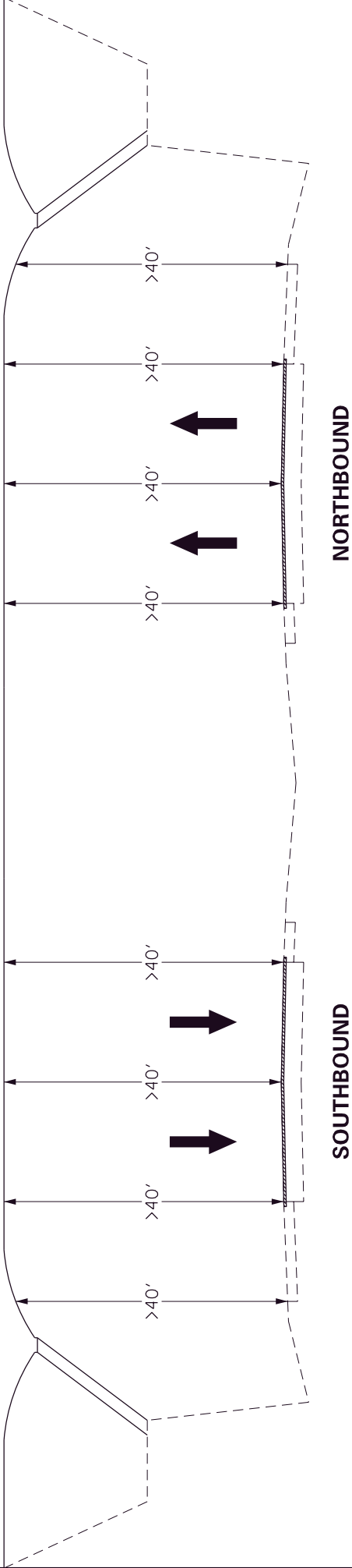
I-165
VERTICAL CLEARANCE

COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	

EXISTING VERTICAL CLEARANCE DETAIL

KY 2665 (GLEN LILY ROAD) OVERPASS
M.P. 9.692

EXIST. KY 2665 (GLEN LILY ROAD) OVER I-165



*NO ACTION NEEDED

NOT TO SCALE

I-165
VERTICAL CLEARANCE

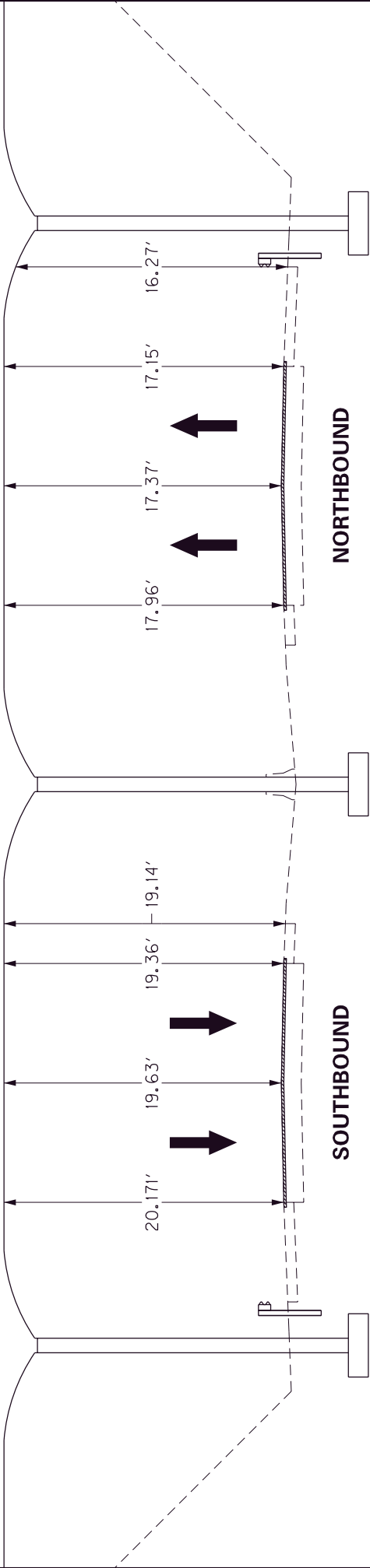
COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	

EXISTING VERTICAL CLEARANCE DETAIL

PRINCE CHAPEL ROAD OVERPASS

M.P. 10.485

EXIST. PRINCE CHAPEL ROAD OVER I-165



*NO ACTION NEEDED

NOT TO SCALE

I-165
VERTICAL CLEARANCE

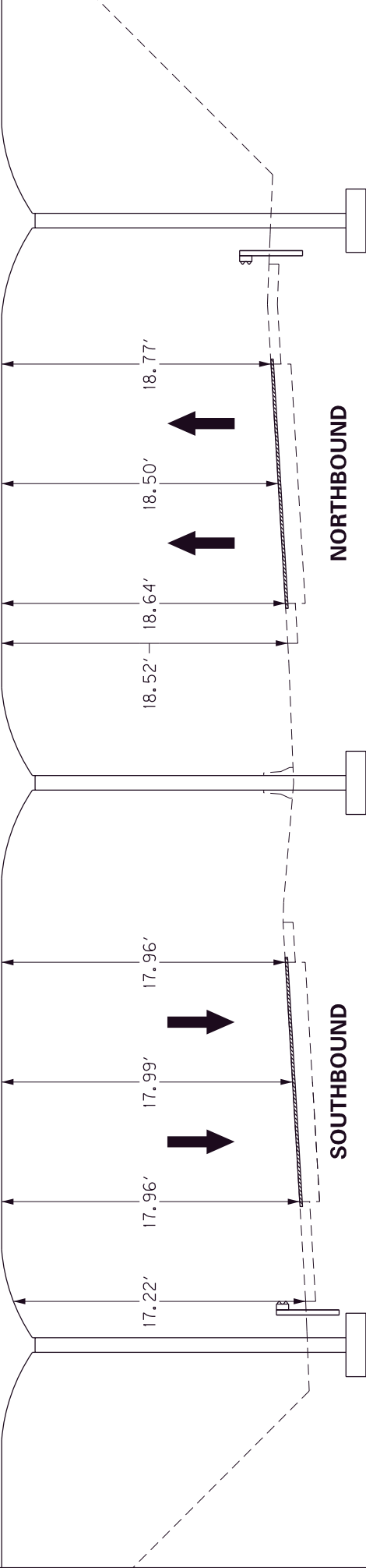
COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	

EXISTING VERTICAL CLEARANCE DETAIL

KY 626 (HIGHLAND CHURCH ROAD) OVERPASS

M.P. 15.122

EXIST. KY 626 (HIGHLAND CHURCH ROAD) OVER I-165



*NO ACTION NEEDED

NOT TO SCALE

I-165
VERTICAL CLEARANCE

USF2 County April 9, 2019

DATE PLOTTED

FILE NAME: G:\NHPP\0124.05 WARREN COUNTY NH-9007\CAD\DETAILS\SEPIA 001.DGN

WARREN COUNTY
NHPP IM 0165 (005)

ITEM NO. 3-2019

COUNTY OF WARREN

SHEET NO.

CONDITION NO. 1: SOIL EMBANKMENT OVER DEEP OVERBURDEN WITH OPEN SINKHOLES

ORIGINAL GROUND LINE

SEE DETAIL "1 A" MAINTAIN POSITIVE DRAINAGE

TYPE IV GEOTEXTILE FABRIC

SOIL OVERBURDEN > 15'

SOIL EMBANKMENT

CLAY SOIL CAP (2' MIN.)

ROCK LINE

EXIST. SOIL

TYPE IV GEOTEXTILE FABRIC

GRANULAR EMB.

DETAIL "1 A"

a. REMOVE DEBRIS. DO NOT EXCAVATE SOIL OVERBURDEN.

b. LINE OPENING WITH TYPE IV GEOTEXTILE FABRIC.

c. REFILL WITH GRANULAR EMBANKMENT.

d. PLACE TYPE IV GEOTEXTILE FABRIC ON TOP OF GRANULAR EMBANKMENT.

e. REFILL WITH (2' MINIMUM) CLAY SOIL CAP.

CONDITION NO. 4: ROCK EMBANKMENT OVER SHALLOW OVERBURDEN WITH SINKHOLE OPENINGS IN ROCK

ORIGINAL GROUND LINE

SEE ALTN. 4B

SEE ALTN. 4A

MAINTAIN POSITIVE DRAINAGE

ROCK LINE

ROCK EMB.

SOIL OVERBURDEN < 15'

EXIST. SOIL

ROCK EMB.

GRANULAR EMBANKMENT

EXIST. SOIL

ROCK LINE

ALTERNATE NO. 4A

PROCEDURE FOR ALTERNATE NO. 4A

a. REMOVE DEBRIS AND SOIL OVERBURDEN.

b. REFILL OPENING TO ROCK LINE WITH GRANULAR EMBANKMENT.

PROCEDURE FOR ALTERNATE NO. 4B

a. REMOVE DEBRIS AND SOIL OVERBURDEN.

b. REFILL OPENING WITH GRANULAR EMBANKMENT

c. CONST. 1' REINFORCED CONC. CAP. CAP SHOULD BE INTERLOCKED WITH ROCK FOR SUPPORT.

CONDITION NO. 2: SOIL EMBANKMENT OVER SHALLOW OVERBURDEN WITH SINKHOLE OPENING IN ROCK

ORIGINAL GROUND LINE

SEE ALTERNATE NO. 2A & NO. 2B

MAINTAIN POSITIVE DRAINAGE

SOIL OVERBURDEN < 15'

TYPE IV GEOTEXTILE FABRIC

SOIL EMB.

CLAY SOIL CAP (2' MIN.)

ROCK LINE

EXIST. SOIL

ROCK EMB.

GRANULAR EMB.

1' REINFORCED CONCRETE CAP

ALTERNATE NO. 2B

PROCEDURE FOR ALTERNATE NO. 2A

a. REMOVE DEBRIS AND SOIL OVERBURDEN.

b. REFILL OPENING WITH GRANULAR EMBANKMENT

c. PLACE TYPE IV GEOTEXTILE FABRIC ON TOP OF GRANULAR EMB. OVERLAPPING ORIG. GROUND LINE.

d. REFILL WITH (2' MIN.) CLAY SOIL CAP.

PROCEDURE FOR ALTERNATE NO. 2B

a. REMOVE DEBRIS AND SOIL OVERBURDEN.

b. REFILL OPENING WITH GRANULAR EMBANKMENT

c. CONST. 1' REINFORCED CONC. CAP. CAP SHOULD BE INTERLOCKED WITH ROCK FOR SUPPORT.

CONDITION NO. 5: CUT SECTIONS WITH SINKHOLE OPENINGS IN ROCK

EXIST. SOIL

ROCK LINE

ROCK

ROADBED

TYPE IV GEOTEXTILE FABRIC

GRANULAR EMB.

CLAY SOIL CAP (2' MIN.)

SOIL SUBGRADE

ALTERNATE NO. 5A

PROCEDURE FOR ALTERNATE NO. 5A

a. REFILL OPENING WITH GRANULAR EMBANKMENT. IF CONCRETE CAP IS USED IT SHALL BE INTERLOCKED WITH THE BEDROCK FOR SUPPORT AS DETAILED IN CONDITION NO. 2 ALTERNATE NO. 2B.

PROCEDURE FOR ALTERNATE NO. 5B

a. REFILL OPENING WITH GRANULAR EMBANKMENT. TO 2' MINIMUM BELOW SOIL SUBGRADE.

b. PLACE TYPE IV GEOTEXTILE FABRIC OVER GRANULAR EMBANKMENT.

c. REFILL WITH (2' MIN.) CLAY SOIL CAP. IF CONCRETE CAP IS USED THE FABRIC SHALL BE OMITTED AND CAP SHALL BE INTERLOCKED WITH THE BEDROCK FOR SUPPORT AS DETAILED IN COND. NO. 2 ALTERNATE NO. 2B.

CONDITION NO. 3: ROCK EMB. OVER DEEP OVERBURDEN WITH OPEN SINKHOLES

ORIGINAL GROUND LINE

ROCK EMBANKMENT

TYPE IV GEOTEXTILE FABRIC

SOIL OVERBURDEN > 15'

ROCK LINE

PROCEDURE:

a. REMOVE DEBRIS. DO NOT EXCAVATE SOIL OVERBURDEN.

b. LINE OPENING WITH TYPE IV GEOTEXTILE FABRIC.

c. REFILL OPENING WITH GRANULAR EMBANKMENT.

CONDITION NO. 6: CUT SECTIONS WITH SINKHOLE OPENINGS IN SOIL

ORIGINAL GROUND LINE

SEE ALTN. 6A

SEE ALTN. 6B

SOIL OVERBURDEN WITH LIMESTONE BOULDERS

TYPE IV GEOTEXTILE FABRIC

SOIL OVERBURDEN < 15'

SOIL SUBGRADE

GRANULAR EMB.

CLAY SOIL CAP (2' MIN.)

ALTN. 6A

ALTN. 6B

ALTERNATE NO. 6A SOIL OVERBURDEN GREATER THAN 15'

a. REMOVE DEBRIS. DO NOT EXCAVATE SOIL OVERBURDEN.

b. LINE OPENING WITH TYPE IV GEOTEXTILE FABRIC.

c. REFILL WITH GRANULAR EMB.

d. PLACE TYPE IV GEOTEXTILE FABRIC OVER GRANULAR EMBANKMENT OVERLAPPING ORIG. GROUND LINE.

e. REFILL WITH (2' MIN.) CLAY SOIL CAP. IF ROCK SUBGRADE IS USED OMIT SOIL CAP AND FABRIC UNDERLYING SOIL CAP.

ALTERNATE NO. 6B SOIL OVERBURDEN LESS THAN 15'

a. REMOVE DEBRIS AND SOIL OVERBURDEN.

b. REFILL OPENING WITH GRANULAR EMBANKMENT

c. PLACE TYPE IV GEOTEXTILE FABRIC OVER GRANULAR EMB.

d. REFILL WITH (2' MIN.) CLAY SOIL CAP. IF CONCRETE CAP IS USED THE FABRIC SHALL BE OMITTED AND CAP SHALL BE INTERLOCKED WITH THE BEDROCK FOR SUPPORT AS DETAILED IN COND. NO. 2 ALTERNATE NO. 2B.

THE CONC. CAP SHALL BE CLASS "B", CONC. AND CON-TAIN NO. 8 REINFORCING BARS PLACED AT 12" CTRS. IN BOTH DIRECTIONS AND LOCATED 3" FROM THE BOTTOM SURFACE OF THE CAP.

DEPARTMENT OF HIGHWAYS

TREATMENT OF OPEN SINKHOLES

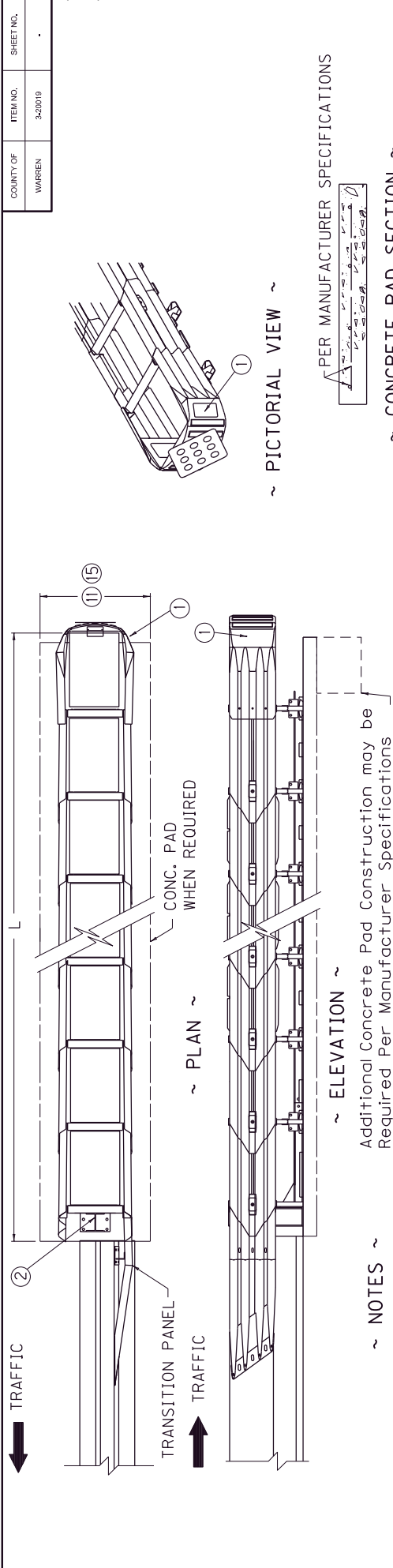
12-1-99

DATE

12-1-99

DATE

001



~ NOTES ~

① NOSE ASSEMBLY (OBJECT MARKER TYPE 1 AS NECESSARY)

② CONSTRUCTION ZONE BACKUP

3. CRASH CUSHION TYPE VI, CLASS B, ☆, △

☆ EITHER TEST LEVEL 2 (TL2) OR TEST LEVEL 3 (TL3), AS REQUIRED.

△ SEE "CONNECTION DETAILS OF CRASH CUSHION TYPE VI TO DOUBLE FACE GUARDRAIL".

4. CRASH CUSHION TYPE VI-BT IS DEPICTED ATTACHED TO A CONCRETE BARRIER (TEMPORARY).

5. WHEN CRASH CUSHION TYPE VI-BT IS ATTACHED TO STEEL "W" BEAM GUARDRAIL (DOUBLE FACE), ALL APPLICABLE DETAILS SHOWN ON CUR. SEPIA 018, "CONNECTION DETAIL OF CRASH CUSHION TYPE VI TO DOUBLE FACE GUARDRAIL" SHALL BE REQUIRED.

6. WHEN CRASH CUSHION TYPE VI-BT IS ATTACHED TO STEEL "W" BEAM GUARDRAIL (DOUBLE FACE), THE TRANSITION PANEL SHALL BE ELIMINATED.

7. IN A TWO-WAY TRAFFIC SITUATION FOR A 6" OR 9" TOP WIDTH WALL, THE UNIT SHALL BE OFFSET FROM THE CENTERLINE OF THE WALL AS SHOWN IN THE PLAN VIEW. FOR A 12" TOP WIDTH WALL, THE UNIT SHALL BE CENTERED ON THE END OF THE BARRIER.

8. FOR ONE-WAY APPROACH TRAFFIC THE UNIT SHALL BE CENTERED ON THE END OF THE BARRIER.

9. THE COMPLETE INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF ENERGY ABSORPTIONS INC. OR TRINITY INDUSTRIES INC.

10. ANCHORAGE DEVICES TO SECURE THE CRASH CUSHION TO THE EXISTING SURFACE SHALL BE SHOWN ON APPROVED SHOP DRAWINGS.

11. THE CONCRETE PAD, PAD EXCAVATION AND STEEL REINFORCEMENT, INSTALLED IN PLACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CRASH CUSHION TYPE VI. DIMENSION AND REINFORCEMENT SPECIFICATIONS FOR CONCRETE PADS ARE TO BE PROVIDED BY THE MANUFACTURER. THE PAD WILL NOT BE REQUIRED WHEN UNIT IS CONSTRUCTED ON RIGID PAVEMENT.

12. THE PAD WILL NOT BE REQUIRED WHEN THE UNIT IS CONSTRUCTED ON EXISTING PAVEMENT OR BRIDGES AND THE COST OF ANCHORING SHALL BE INCLUDED IN THE UNIT PRICE OF THE CRASH CUSHION.

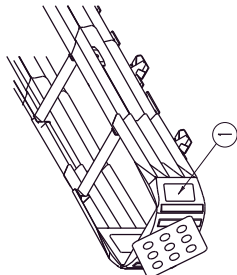
13. USE WITH CUR. SEPIA 018 WHEN CONNECTING TO DOUBLE FACE GUARDRAIL.

14. PERMISSIBLE ALTERNATES FOR CRASH CUSHION TYPE VI-BT ARE PATENTED ITEMS: ENERGY ABSORPTION SYSTEMS, INC. OF CHICAGO, IL., TRINITY INDUSTRIES, INC. OF DALLAS, TX.

15. CRASH CUSHIONS ARE TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS, INCLUDING THE CONCRETE PAD.

16. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP DRAWINGS TO THE CONTRACTOR WITH EACH INSTALLATION.

17. NCHRP-350-COMPLIANT CRASH CUSHIONS WILL BE ACCEPTED IN INSTANCES WHERE MASH-COMPLIANT DEVICES ARE NOT YET AVAILABLE.



~ PICTORIAL VIEW ~

~ PER MANUFACTURER SPECIFICATIONS

~ CONCRETE PAD SECTION ~
(PER MANUFACTURER SPECIFICATIONS)
REFER TO NOTES ⑪ ⑮

CLASS	SPEED (MPH)	ATTENUATOR		
		MODEL	PRODUCT NAME	LENGTH
B	45 & LESS	TL2	SHORTTRACC	14'-0"
	OVER 45	TL3	3-BAY QUADGUARD M10	12'-0"
			TRACC	21'-0"
			5-BAY QUADGUARD M10	18'-0"

A TYPE VI-CLASS C CAN BE USED AT THE CONTRACTOR'S DISCRETION.

USE WITH CUR. SEPIA 018
& SEPIA 020

KENTUCKY
DEPARTMENT OF HIGHWAYS

CRASH CUSHION
TYPE VI-BT

SUBMITTED
DATE

1-02-19

ACTING DIRECTOR DIVISION OF HIGHWAY DESIGN

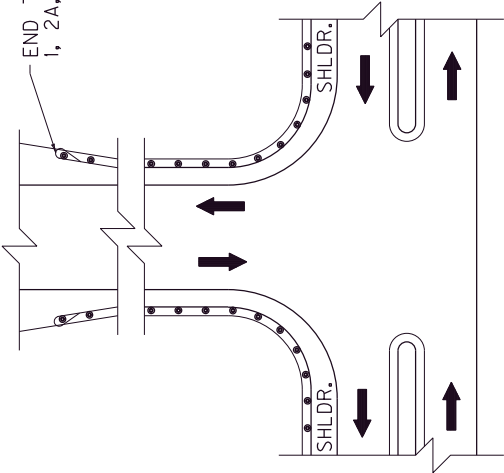
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COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	-

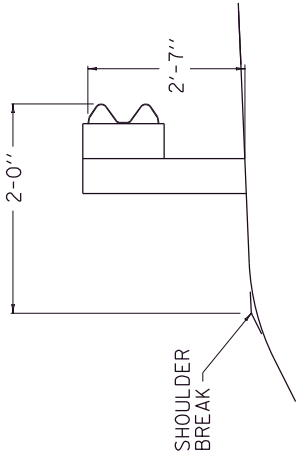
~ NOTES ~

1. FOR END TREATMENT TYPE 4A USE CUR. STD. DWG. RBR-035 FOR OFFSETS.
2. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET: (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).

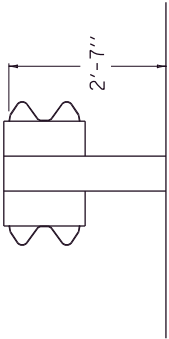
END TREATMENT (TYPES
1, 2A, 3, 4A, OR 7 AS REQUIRED)



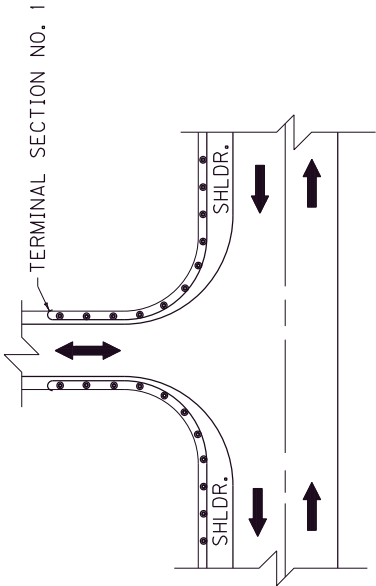
APPROACH ROADS



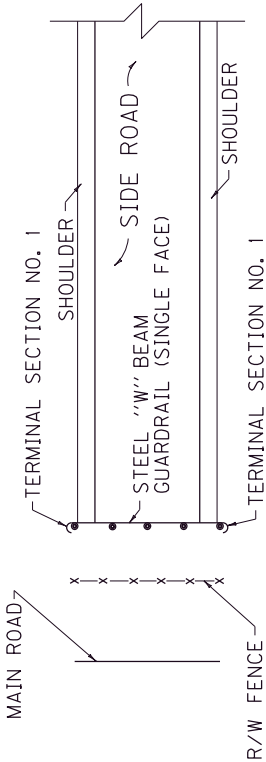
NORMAL GUARDRAIL INSTALLATION



TYPICAL DOUBLE FACE
GUARDRAIL INSTALLATION



ENTRANCES

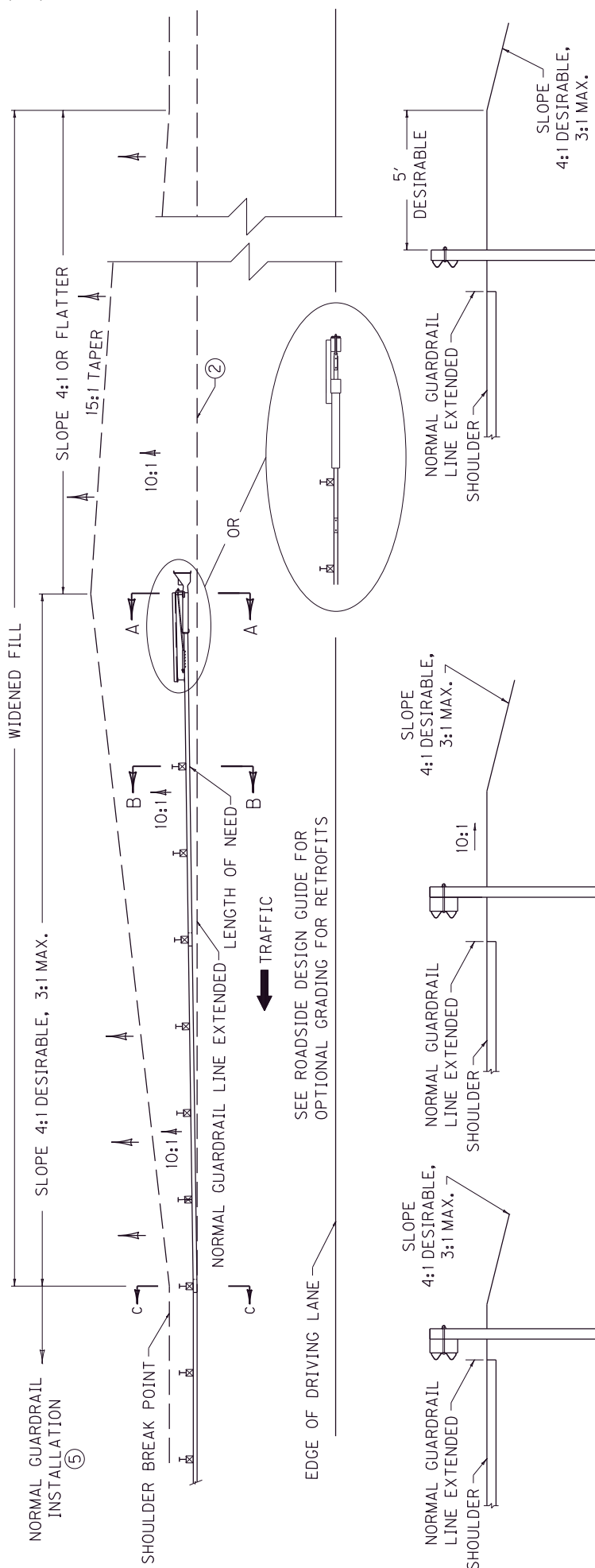


GUARDRAIL USED AS A BARRICADE

USE WITH CUR. STD. DWG.
RBI-002, RBR-035

KENTUCKY DEPARTMENT OF HIGHWAYS
TYPICAL GUARDRAIL INSTALLATIONS
SUBMITTED <i>Shelley</i> 11-17-17 DIRECTOR DIVISION OF DESIGN DATE
024

COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	-



SECTION C-C

SECTION B-B

SECTION A-A

NOTES

- BID ITEMS AND UNIT TO BID:
GUARDRAIL END TREATMENT TYPE 1 EACH
ROADWAY OR BORROW EXCAVATION, CUYD
OR EMBANKMENT IN PLACE
1. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE
END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET
(LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS
WARRANT).
- ② GUARDRAIL EXTRUDER EDGE CLOSEST TO TRAFFIC SHALL BE
ON NORMAL GUARDRAIL LINE EXTENDED.
- ③ END TREATMENT TYPE 1 MAY BE ATTACHED TO CURVED GUAR
IS A 550' RADIUS. OR MORE. END TREATMENT TYPE 1 SHALL
TAPER WITHIN THE PAY LIMITS.
4. INTENDED USE: FILLS WITH ADEQUATE VEHICLE RECOVERY
- ⑤ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL
TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF
TO BE REPLACED.

USE WITH CUR. STD. DWG.
RBR-020

TRAFFIC ↓

GUARDRAIL END TREATMENT TYPE 1
INSTALLED ON A CURVE ③

**KENTUCKY
DEPARTMENT OF HIGHWAYS
INSTALLATION OF
GUARDRAIL
END TREATMENT
TYPE 1**

SUBMITTED William J. Lattol 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

025

COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	-



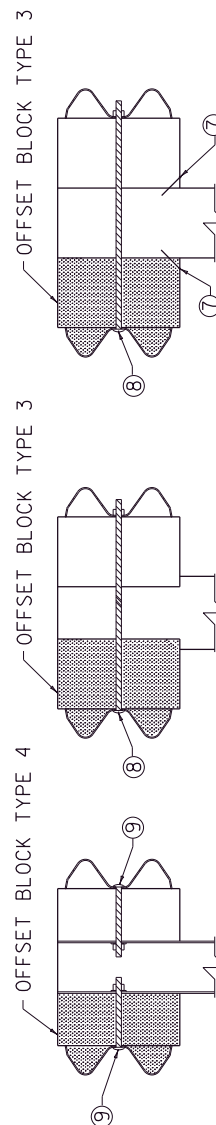
BID ITEM AND UNIT TO BID
GUARDRAIL-STEEL W BEAM-S FACE
OR
GUARDRAIL-STEEL W BEAM-D FACE

1. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE AND ACCEPTED MANUFACTURING PRACTICES.
2. THE RAIL ELEMENT SHALL COMPLY WITH AASHTO M-180 -CLASS A, TYPE II.
3. ALL LAPS SHALL BE PLACED IN THE DIRECTION OF TRAFFIC FLOW.
4. TOLERANCE + 1/4", -1/4"
5. 8-5/8" x 1/4" LONG BUTTON HEAD BOLTS AND HEX HEAD RECESS NUTS REQUIRED FOR EACH RAIL SPLICE.
6. LENGTH EQUALS POST AND BLOCK WIDTH PLUS 2" FOR BOLT OR 2 1/4" FOR THREADED ROD.
7. GALVANIZED STEEL 100 COMMON COATED NAIL (DRIVE NAIL AT THE TOP OR BOTTOM CENTER OF BLOCK AND POST AFTER BOLT IS INSTALLED).
8. 5/8" x 6" STEEL THREADED ROD AND TWO (2) HEX HEAD NUTS OR 5/8" x 6" BUTTON OR HEX HEAD BOLT AND HEX HEAD NUT.
9. 5/8" x 8" BUTTON HEAD BOLT, HEX HEAD RECESS NUT AND ONE 5/8" ROUND WASHER (TYP.), BOLT SHALL HAVE A MINIMUM THREAD LENGTH OF 2".
[REINFORCING BAR SYMBOL] REQUIRED FOR DOUBLE RAIL
10. BOTH 12'-6" AND 25' LENGTHS OF "W" BEAM GUARDRAIL SECTIONS WILL BE PERMITTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



RAIL SPLICE ⑤

SECTION B-B



SECTION A-A
DOUBLE FACE RAIL WITH
TIMBER POST

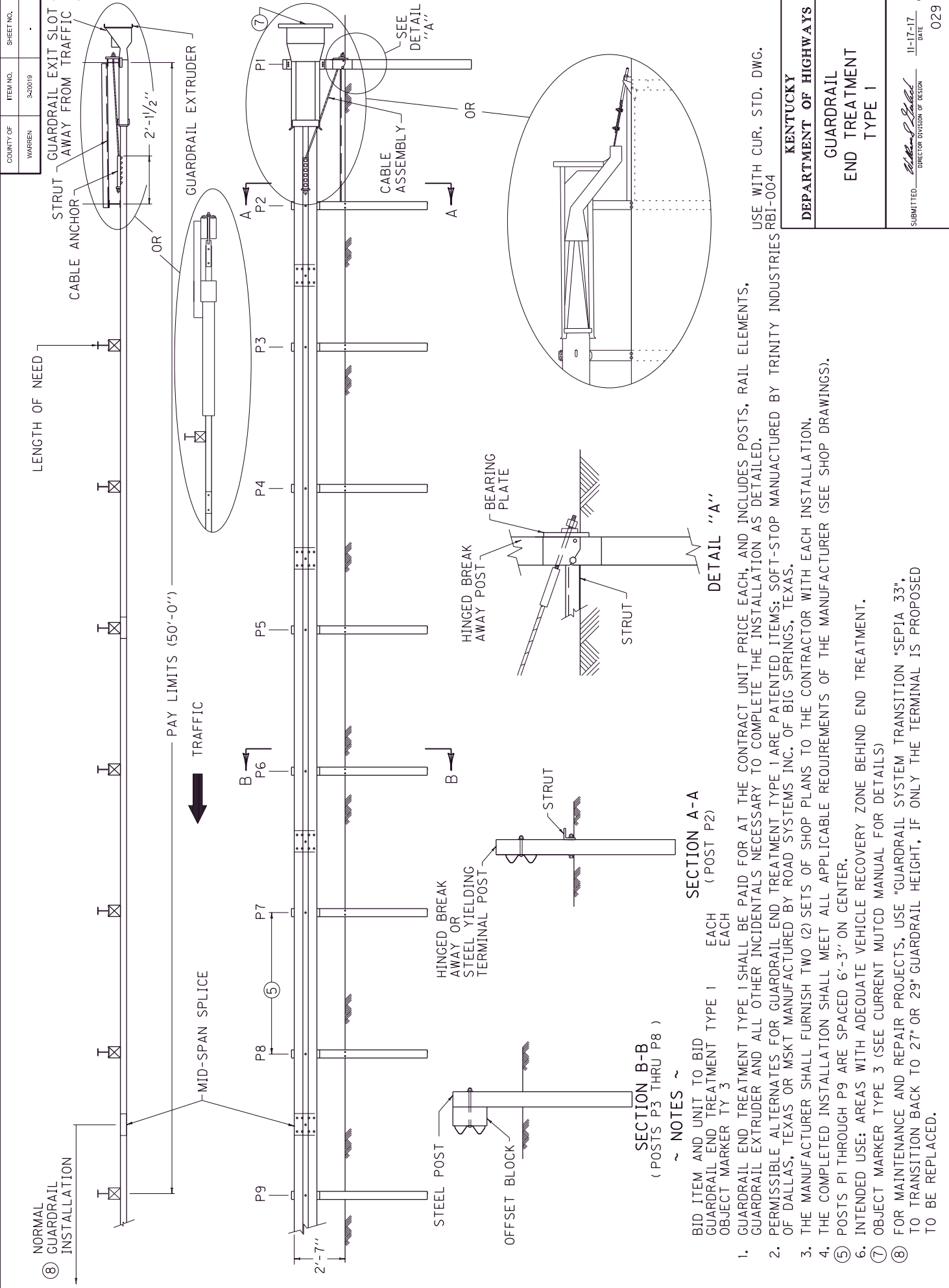
SECTION A-A
DOUBLE FACE RAIL WITH
ROUND TIMBER POST

SECTION A-A

KENTUCKY
DEPARTMENT OF HIGHWAYS

STEEL BEAM
GUARDRAIL
("W" BEAM)

SUBMITTED William J. Lalack 11-17-17
DIRECTOR DIVISION OF DESIGN DATE 027



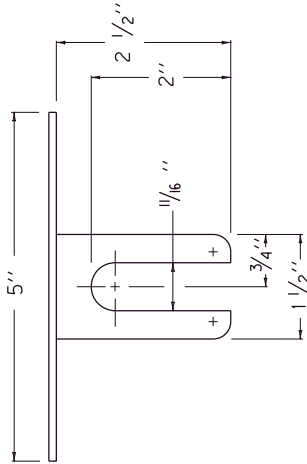
COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	-

~ NOTES ~

BID ITEMS AND UNIT TO BID
DELINEATOR FOR GUARDRAIL B/W
DELINEATOR FOR GUARDRAIL M/W
DELINEATOR FOR GUARDRAIL M/Y

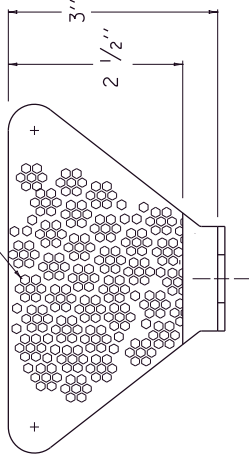
EACH
EACH
EACH

1. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
2. DELINEATOR SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.
3. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.
4. DELINEATORS SHALL NOT BE INSTALLED WITHIN THE PAY LIMITS OF THE END TREATMENT.
5. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.
6. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.
7. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT STANDARD DRAWING RBM-020.
8. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



PLAN VIEW

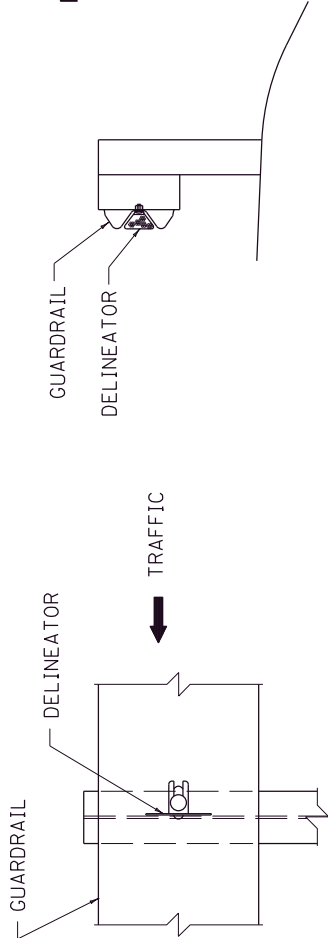
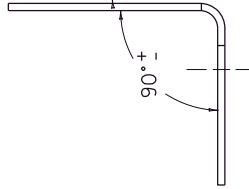
TYPE IX SHEETING,
YELLOW OR WHITE



FRONT VIEW

DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.

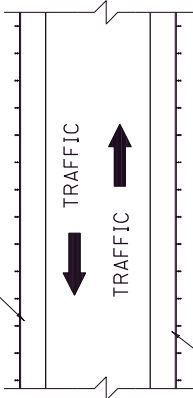
SIDE VIEW



FRONT VIEW

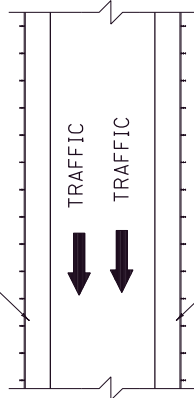
SIDE VIEW

BI-DIRECTIONAL WHITE DELINEATOR
FOR GUARDRAIL FACING TRAFFIC



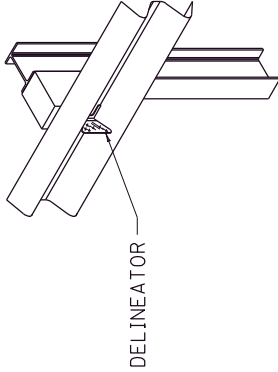
BI-DIRECTIONAL WHITE DELINEATOR
FOR GUARDRAIL FACING TRAFFIC

MONO-DIRECTIONAL WHITE DELINEATOR
FOR GUARDRAIL FACING TRAFFIC



MONO-DIRECTIONAL YELLOW DELINEATOR
FOR GUARDRAIL FACING TRAFFIC

PLACEMENT OF DELINEATORS
FOR GUARDRAIL



ISOMETRIC VIEW

USE WITH CUR. STD. DWGS.
RBM-020, RBR-060

KENTUCKY
DEPARTMENT OF HIGHWAYS

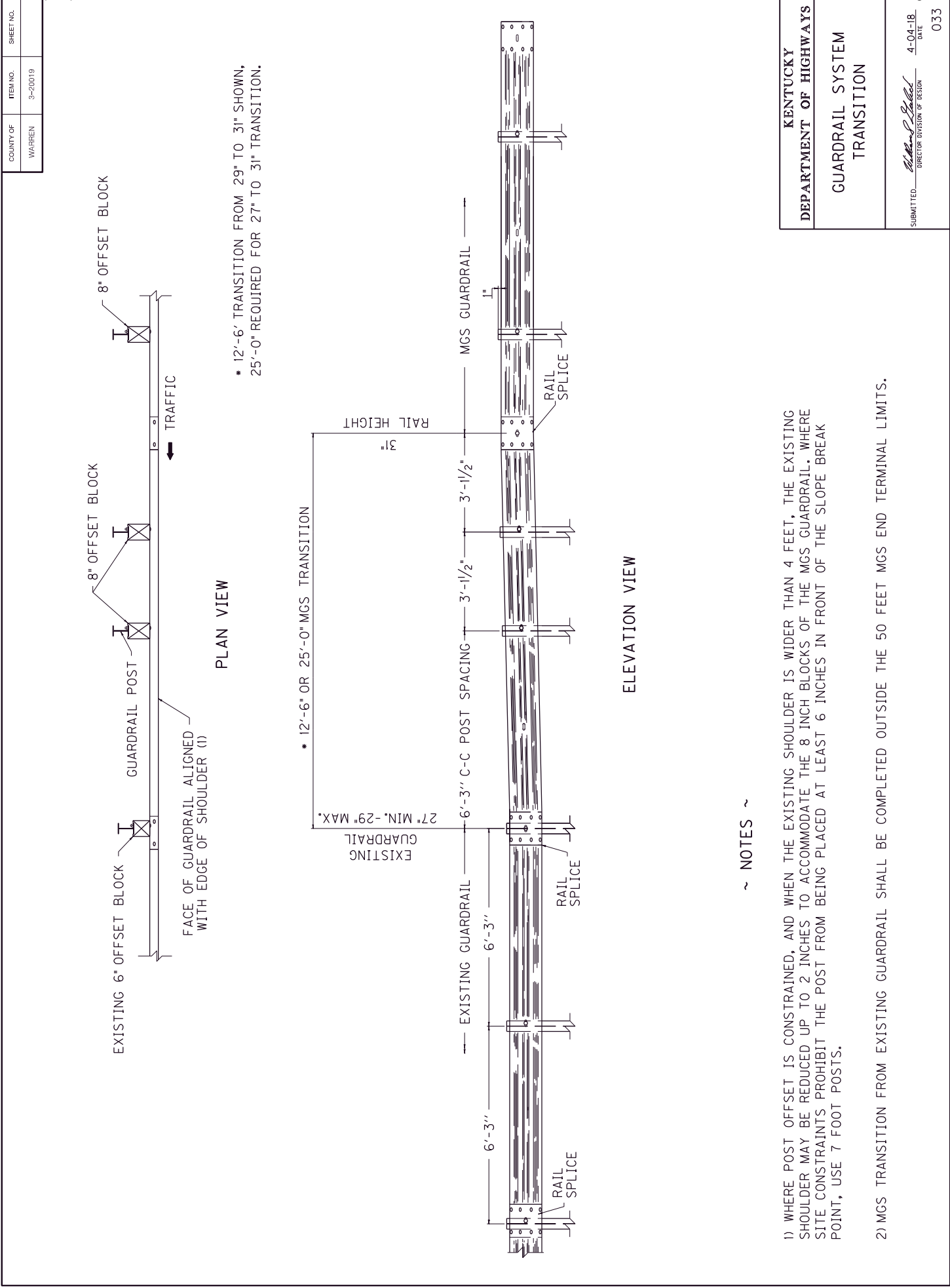
DELINEATORS
FOR GUARDRAIL

APPROXIMATE DELINEATOR SPACING

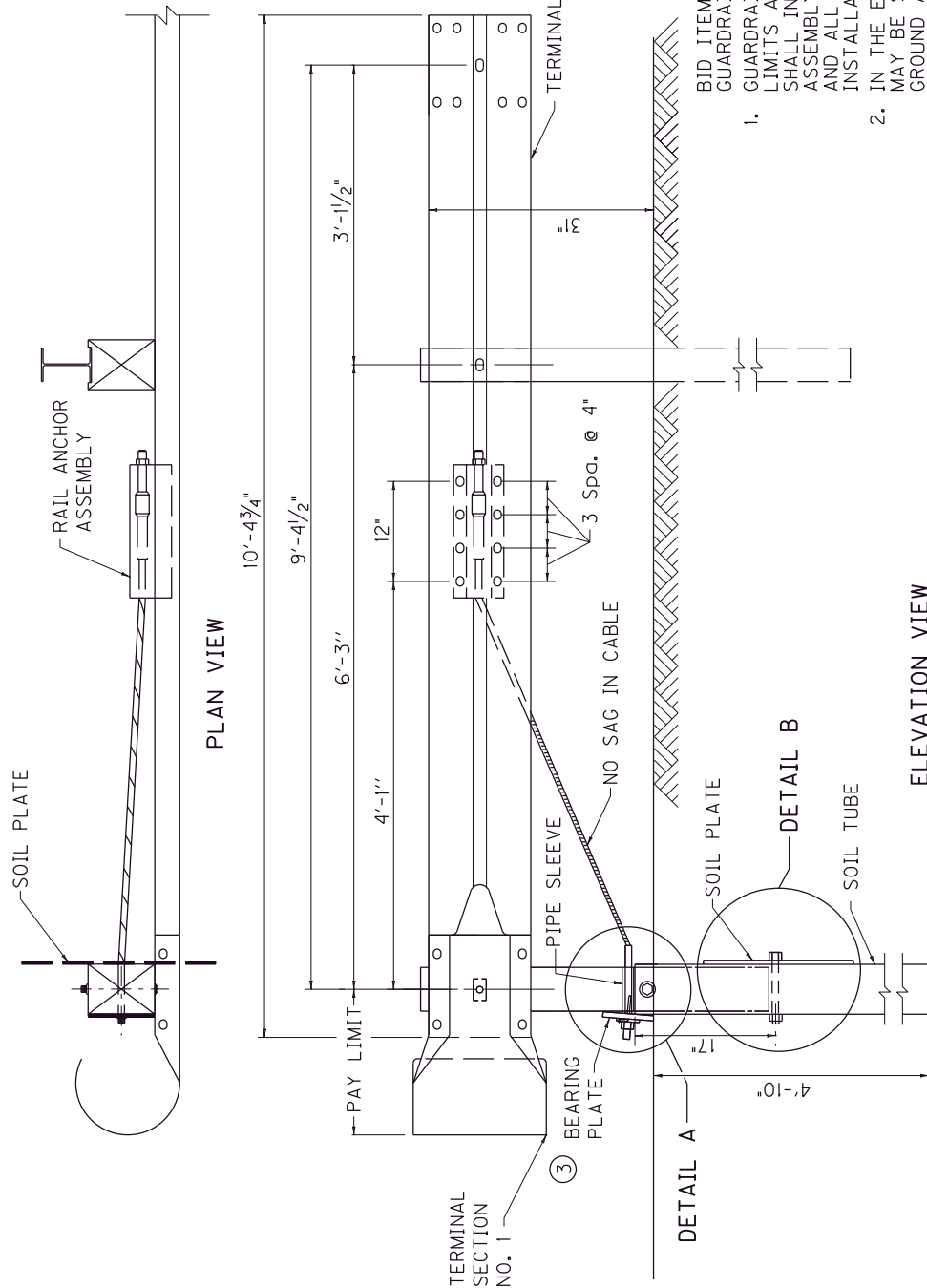
TANGENT	100'
CURVE	50'

SPACING SHOULD BE ADJUSTED IN CURVES
SO THAT SEVERAL DELINEATORS ARE ALWAYS
SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

SUBMITTED: *[Signature]* 11-17-17
DATE: DIRECTOR, DIVISION OF DESIGN
032



COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	-



~ NOTES ~

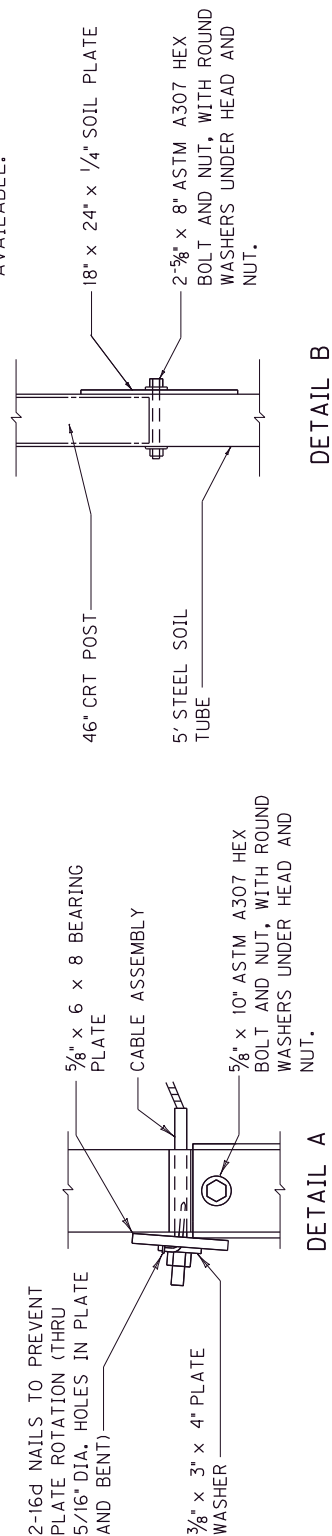
1. BID ITEM AND UNIT TO BID GUARDRAIL END TREATMENT TYPE 2A EACH
GUARDRAIL END TREATMENT TYPE 2A SHALL BE TO THE PAY LIMITS AS DETAILED. THE CONTRACT UNIT BID IS EACH AND SHALL INCLUDE A TERMINAL SECTION NO. 1, RAIL ANCHOR ASSEMBLY, CABLE ANCHOR ASSEMBLY, SOIL TUBE, SOIL PLATE AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE INSTALLATION AS DETAILED.
2. IN THE EVENT SOLID ROCK IS ENCOUNTERED, THE SOIL TUBE MAY BE SHORTENED, PROVIDED IT EXTENDS INTO THE SOLID GROUND A MINIMUM OF 3 FEET.
- ③ INSTALL BEARING PLATE SO THAT THE "V" OPENING IS AT THE TOP.
4. NCHRP-350-COMPLIANT CRASH CUSHIONS WILL BE ACCEPTED IN INSTANCES WHERE MASH-COMPLIANT DEVICES ARE NOT YET AVAILABLE.

USE WITH CUR. STD. DWGS.
RBI-002, RBI-003, RBR-010
& SEPIA 024

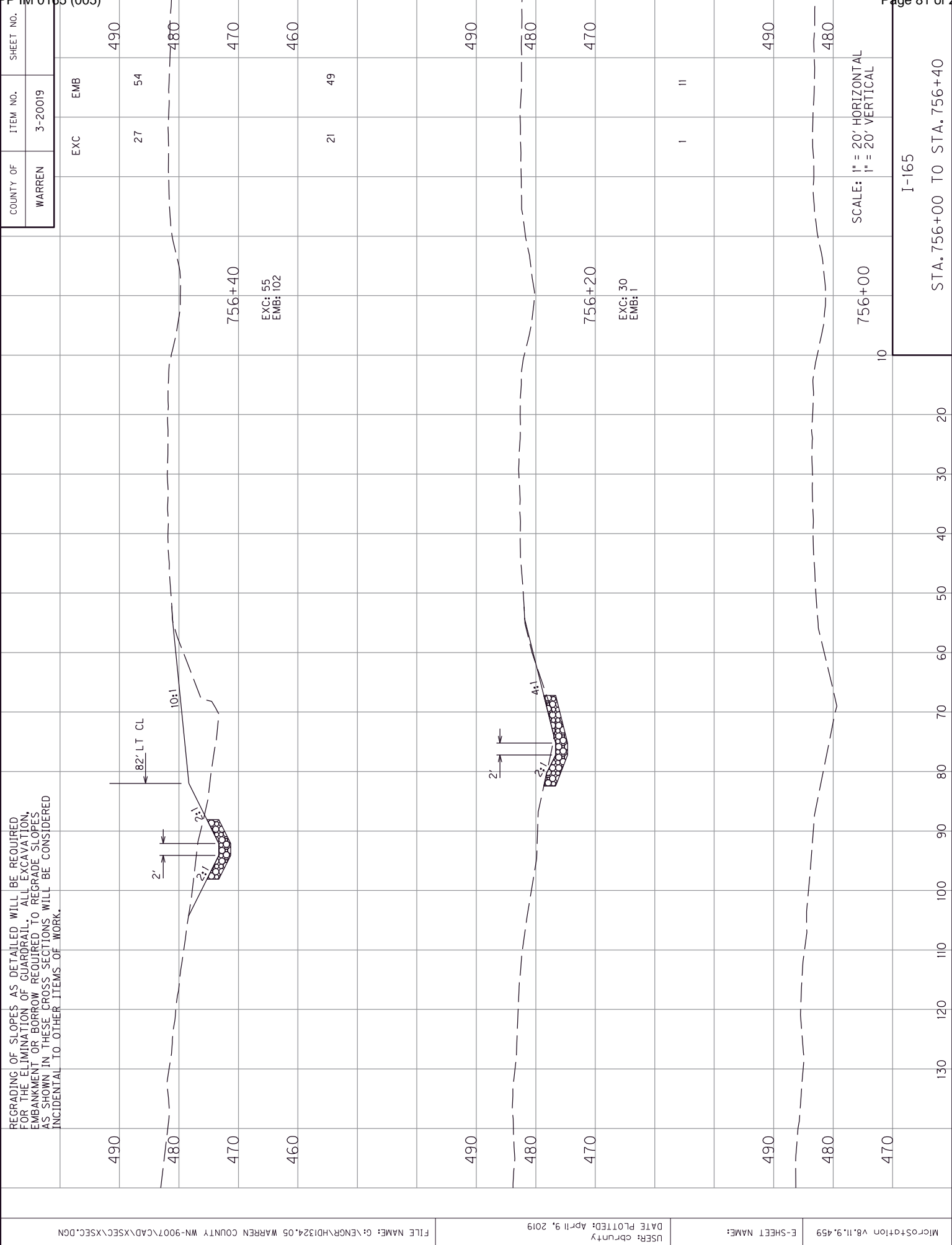
KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL
END TREATMENT
TYPE 2A

SUBMITTED *[Signature]* DATE 1-16-19
ACTING DIRECTOR DIVISION OF HIGHWAY DESIGN 038



DETAIL B

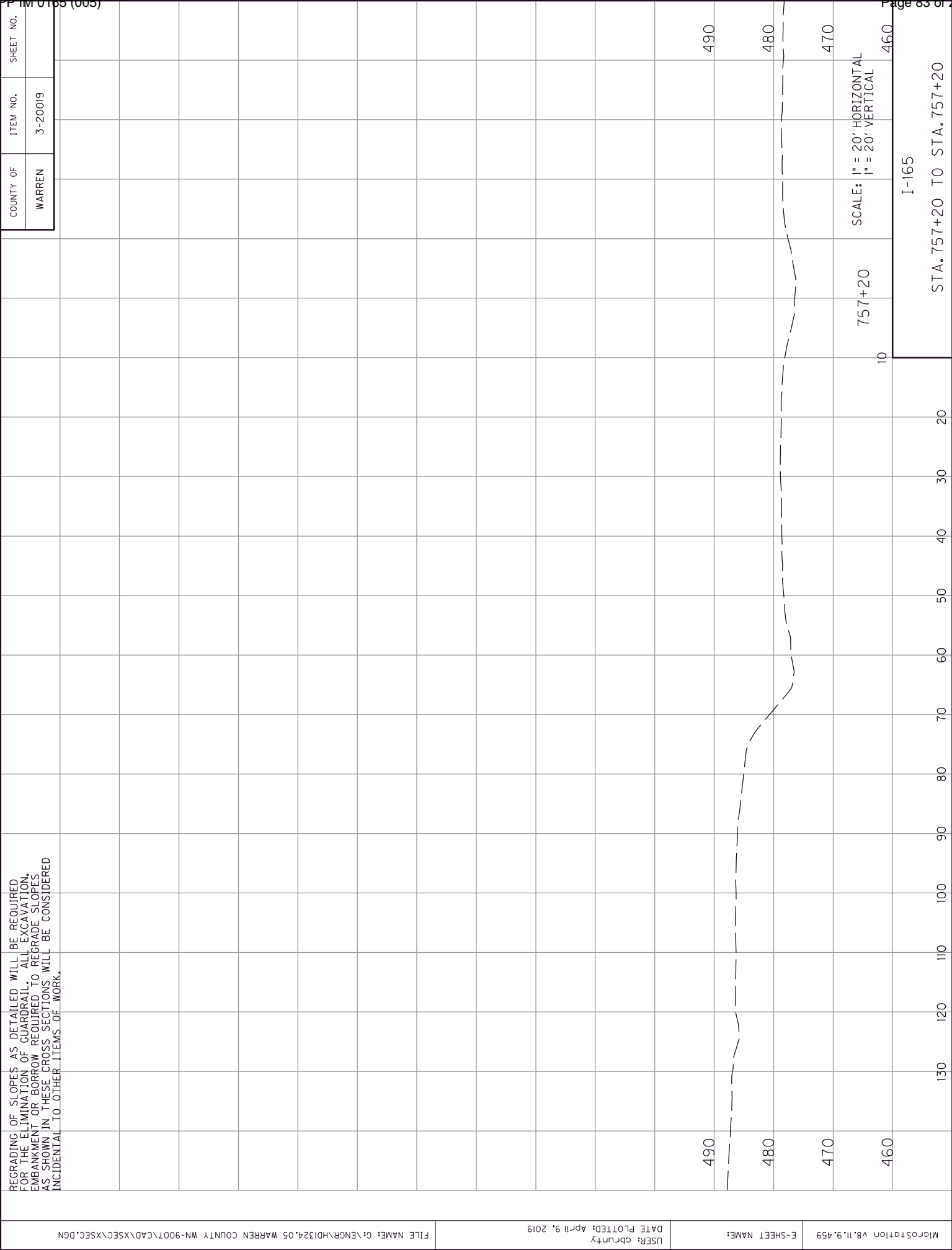


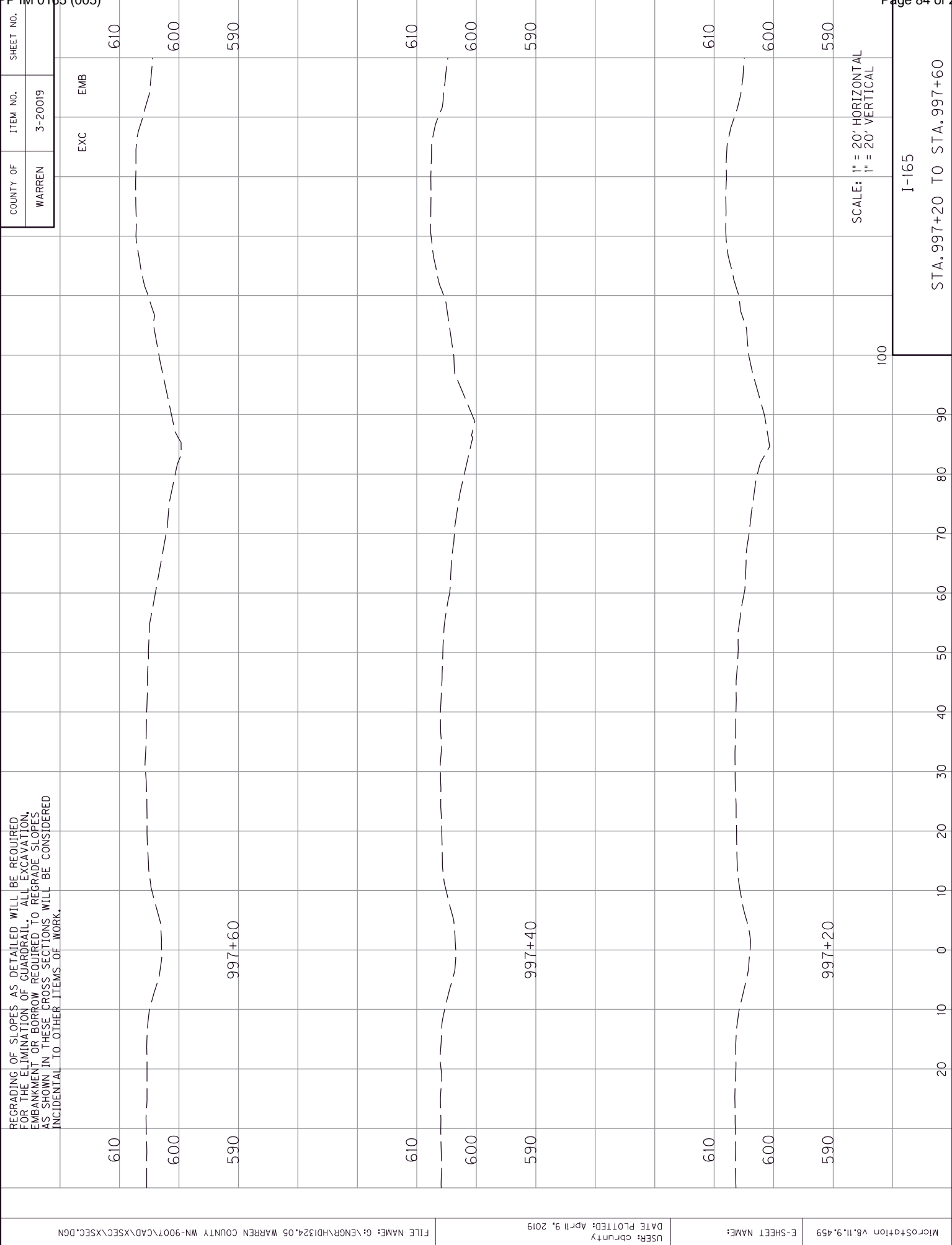
COUNTY OF	ITEM NO.	SHEET NO.
WARREN	3-20019	

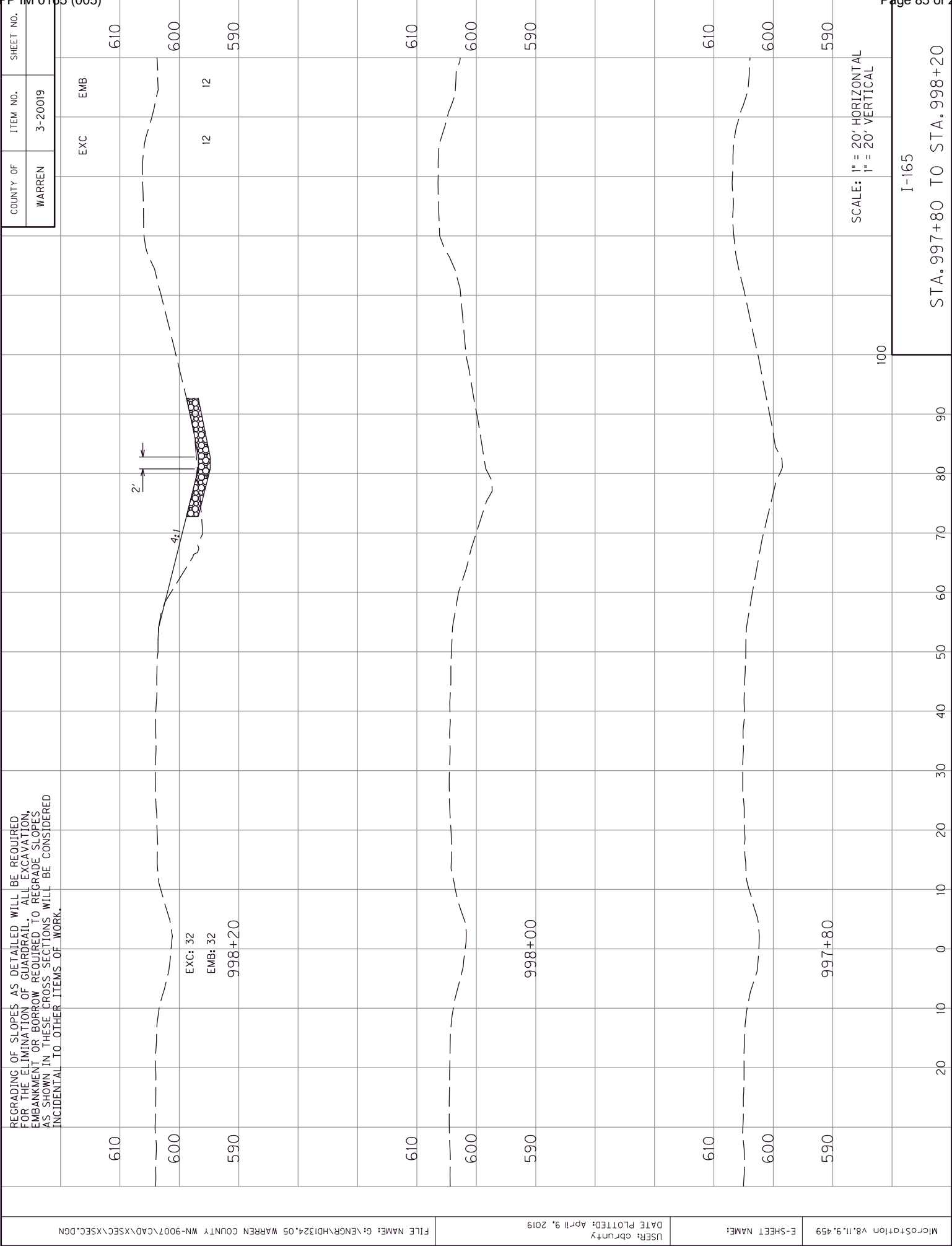
REGRADING OF SLOPES AS DETAILED WILL BE REQUIRED FOR THE ELIMINATION OF GUARDRAIL. ALL EXCAVATION, EMBANKMENT OR BORROW REQUIRED TO REGRADE SLOPES AS SHOWN IN THESE CROSS SECTIONS WILL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK.

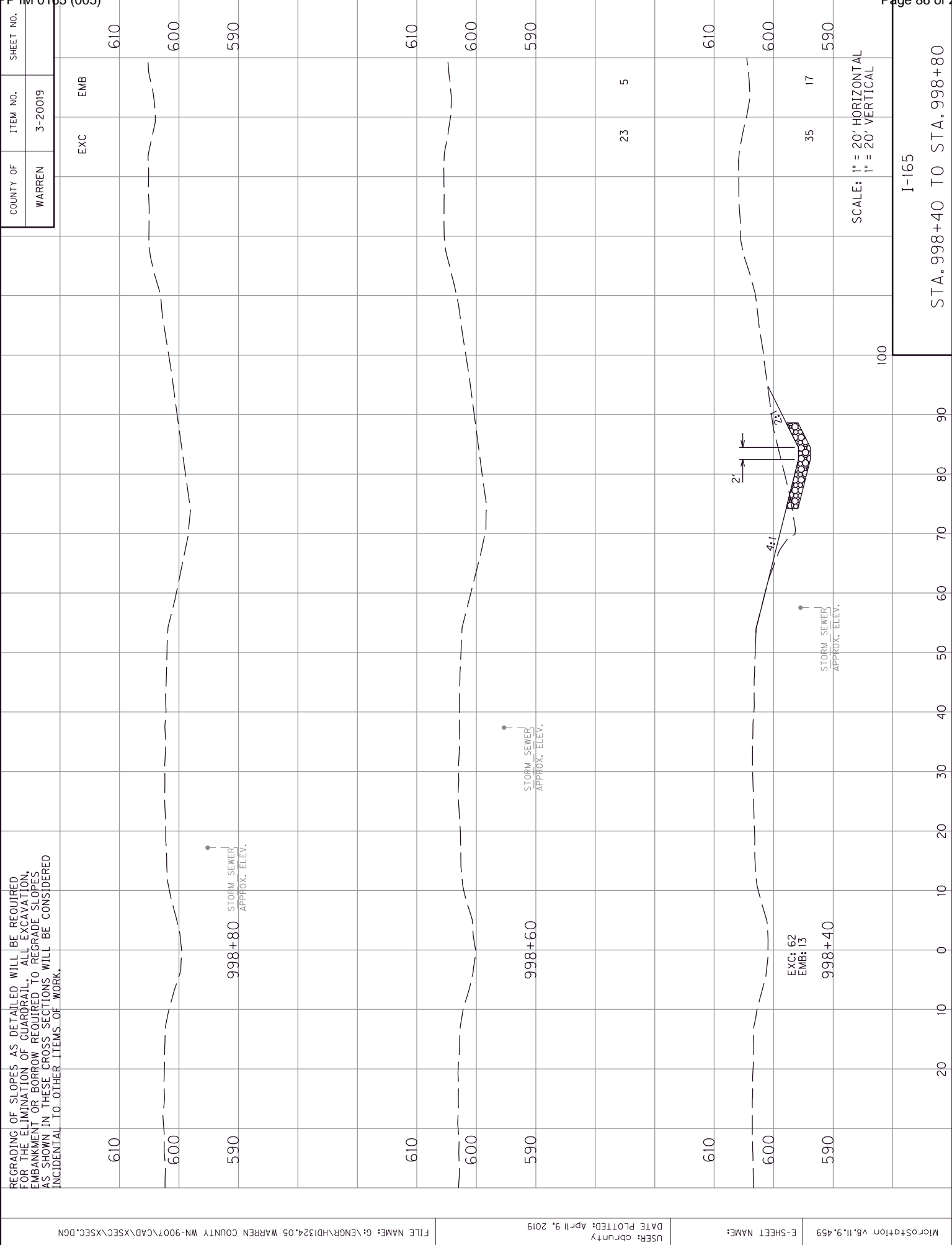
ELEVATION	STATIONING	EXC	EMB
490	756+80		
480	756+80		
470	756+80		
460	756+80		
490	757+00		
480	757+00		
470	757+00		
460	757+00		

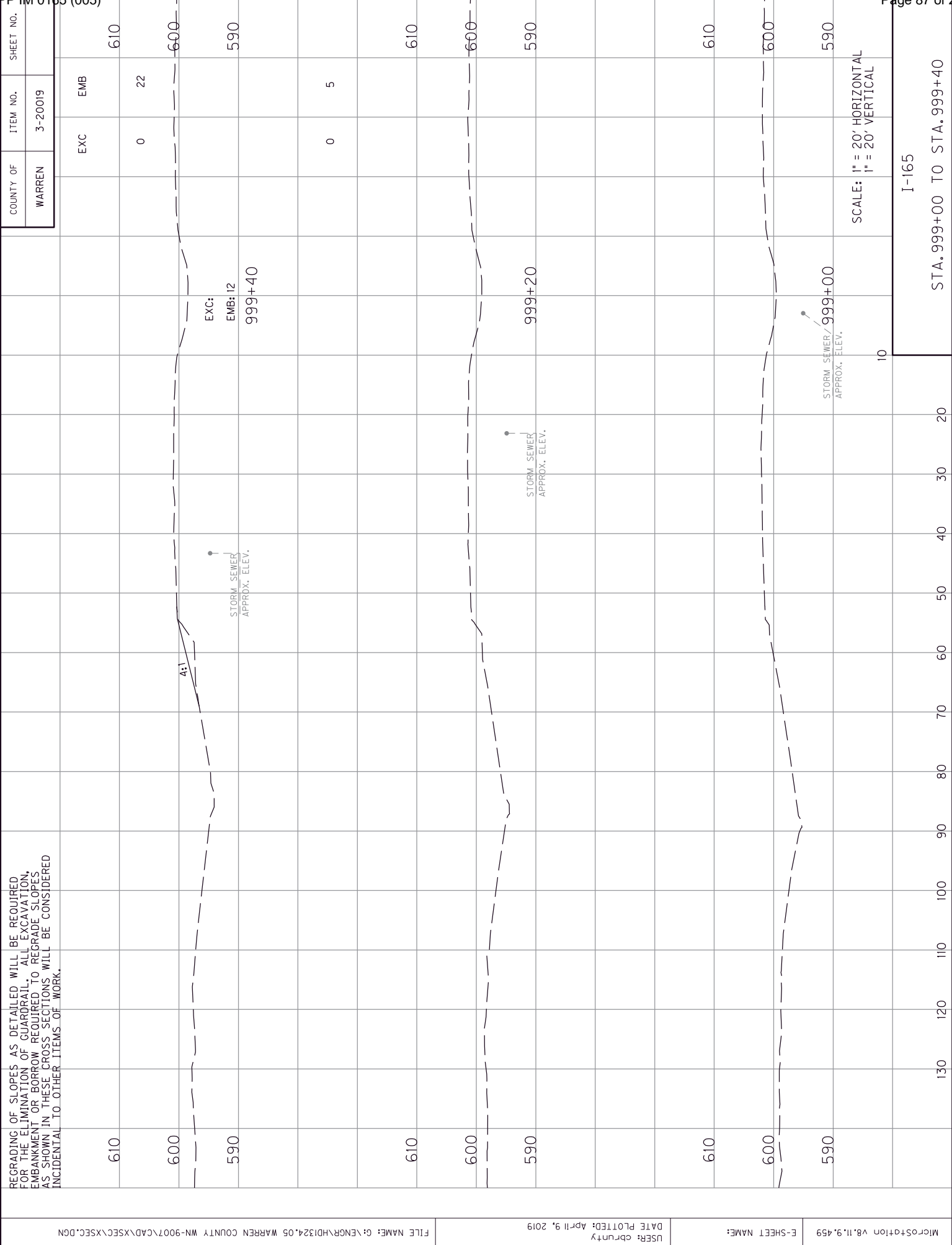
I-165
STA. 756+60 TO STA. 757+00

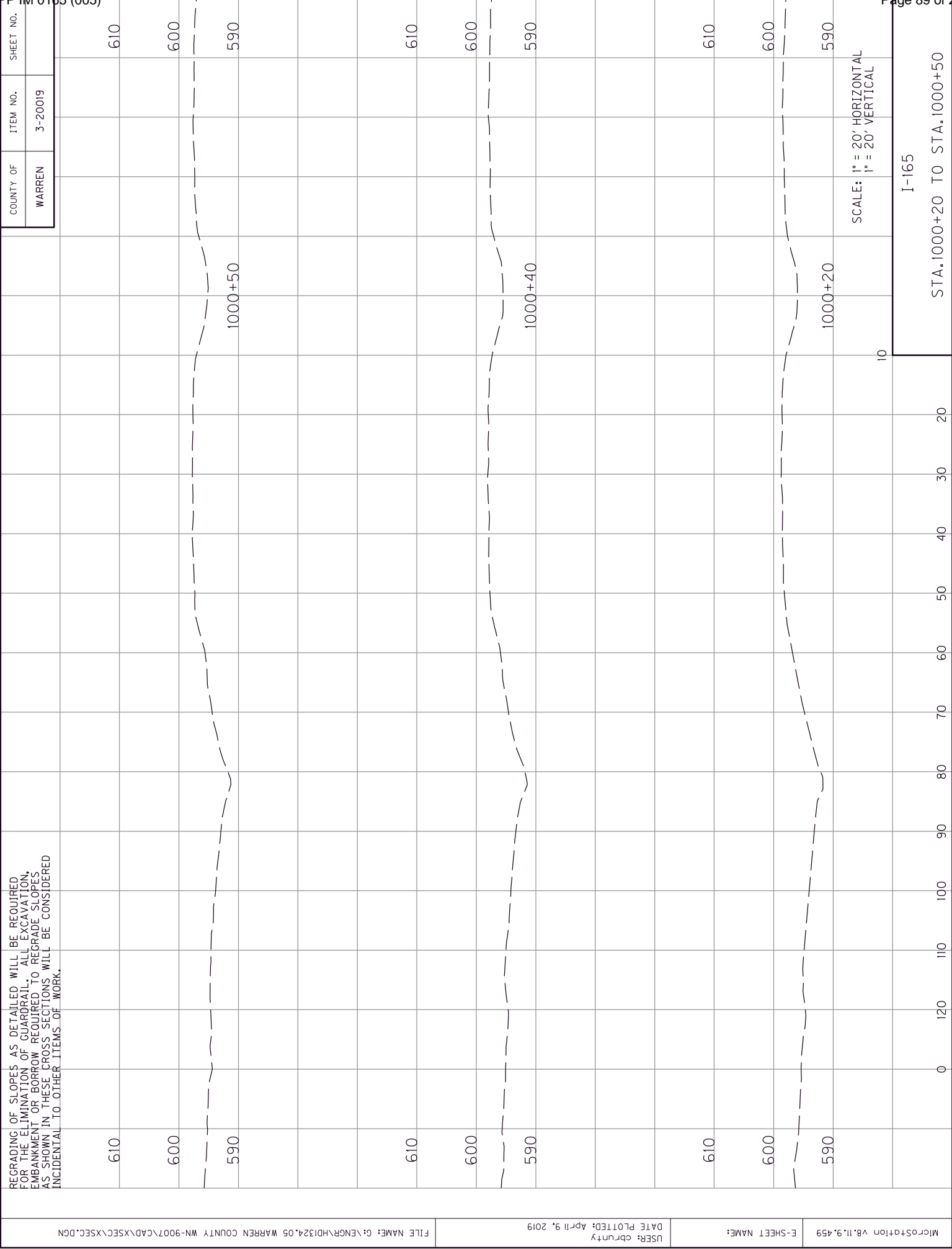












**TRAFFIC CONTROL PLAN
WARREN COUNTY
I-165
NHPP IM 0651 (102)
FD52 114 0165 007-019
Item No. 3-20019**

<p>THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY</p>

TRAFFIC CONTROL GENERAL

Except as provided herein, "Maintain and Control Traffic" shall be in accordance with the 2012 Standard Specifications and the Standard Drawings, current editions. 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". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings. Do NOT use cones for lane closures or shoulder closures.

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. Traffic control devices will conform to current MUTCD.

Reduce the speed limit in work areas to 55 miles per hour (35 miles per hour for ramps) and establish double fines for work zone speeding violations. The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. At the beginning of the work zone, the "WARNING FINE DOUBLED IN WORK ZONE" signs will be dual mounted. At the end of the work zone, the "END DOUBLE FINE" signs will be dual mounted as well. Remove or cover the signs when the highway work zone does not have workers present for more than a two-hour period of time. Payment for the signs will be at the unit bid price for Temporary Signs. Any relocation or covering of the signs will be incidental to "Maintain and Control Traffic", lump sum.

Night work will be allowed on this project. Obtain approval from the Engineer for the method of lighting prior to its use.

PROJECT PHASING & CONSTRUCTION PROCEDURES

No lane closures will be allowed on the project during the following days unless otherwise approved by the Engineer:

Memorial Day Weekend	May 25 th – May 27 th , 2019
Independence Day	July 4 th , 2019
Labor Day Weekend	Aug 31 st – Sept 2, 2019
Thanksgiving Weekend	Nov 28 th – Dec 1, 2019
Christmas Holiday	Dec 24 th – Dec 25 th , 2019
New Year's Day	Jan 1 st , 2020

PAVEMENT REPAIR LOCATIONS

Approximate pavement repair and base failure locations are listed elsewhere in the proposal. The Engineer will determine the exact location at the time of construction. Once removal of pavement at a particular repair location has begun, the contractor shall work continuously to complete the work required to bring the pavement back to grade. Type III Barricades shall be placed immediately in front of pavement removal areas.

Access to all ramps at all interchanges on the project shall be maintained at all times unless otherwise directed by the Engineer. All diversions to access ramps in areas of lane closures shall be approved by the Engineer prior to implementing each particular lane closure.

The contractor must notify the Engineer at least seven (7) days prior to the beginning of each construction phase in either direction.

SHOULDER PREPARATION AND RESTORATION

The clear lane width will be 12 feet; however, make provisions for the passage of wide loads up to 16'. Use a lane closure all times when work is performed in the lane or adjacent shoulder. Shoulders used as temporary roadways will be inspected by the Engineer and if deemed necessary by the Engineer, repaired with asphalt mixture for leveling & wedging as directed prior to opening to traffic. Perform any maintenance of the shoulder as deemed necessary by the Engineer in order to maintain traffic. Remove failed materials and perform additional patching as directed by the Engineer prior to using the shoulder as a travel lane. Patch and remove any foreign debris on the shoulders as directed by the Engineer. Remove existing striping by water blasting. In accordance with section 112.04.01, the department will not measure the removal of pavement striping and the removal of pavement markings and will consider this item incidental to "Maintain and Control Traffic". No additional measurement or payment will be made for maintenance or repairs to shoulders used for temporary travel lanes and will be considered incidental to "Maintain and Control Traffic".

Project Phasing:

PHASE I

In this phase, complete Pavement Repairs, Shoulder Slope Modifications, and Pipe Extensions and/or Headwall Installations located in the mainline outside lanes and on the ramps. Complete Bridge restoration of the Bridge over Gasper River. Complete Erosion Remedial Measures, Paved Ditch Removal, Guardrail Repairs and all other items of work required prior to placement of the final surfacing.

Phase Ia – Using an inside lane closure, construct shoulder strengthening for Gasper River Bridge approaches (inside shoulder) by mill and inlay prior to traffic shift for Phase Ib. Configure striping to reduce lane widths to 9’.

Phase Ib – Close the outside lane and shift traffic partially onto the inside shoulder and reduce lane widths to 9’ for bridge restoration activities as detailed, using 55:1 lane shifts. Complete bridge restoration activities for the outside lanes, construct outside lane shoulder strengthening, and configure striping to reduce outside lane widths to 9’.

Phase Ic – Close the inside lane and shift traffic partially onto the outside shoulder and reduce lane widths to 9’ for bridge restoration activities as detailed, using 55:1 lane shifts. Complete bridge restoration activities for the inside lanes. Reconfigure striping for 4 – 12’ lanes both northbound and southbound and reopen all lanes to traffic.

Phase Id - Shift mainline traffic to the inside lanes maintaining a 12’ lane width except in local work zones areas. Lanes may be reduced to a minimum of 10’ for short durations in the local vicinity of milling and paving repair operations or other approved work zones in which work is required adjacent to edge lines. Restore lanes to 12’ wide as soon as practical. Complete all work in the outside lanes and outside shoulders and roadside except final surfacing and final pavement markings.

Phase Ie – Shift mainline traffic to the outside lanes maintaining a 12’ lane width except in local work zones areas. Lanes may be reduced to a minimum of 10’ for short durations in the local vicinity of milling and paving repair operations or other approved work zones in which work is required adjacent to edge lines. Restore lanes to 12’ wide as soon as practical. Complete all work in the inside lanes and outside shoulders and median except final surfacing and final pavement markings.

Remove lane closures and restore traffic to two lanes on the mainline for any period of time more than 3 days that no work will be performed requiring a lane closure.

ATTENTION: Activities detailed in Phase Ib and Phase Ic must be completed within 28 consecutive Calendar Days. Penalties will apply for failure to complete these activities within the specified time frame. See Special Note for Fixed Completion Date and Liquidated Damages.

PHASE II

Close outside lanes to traffic. Perform the 1.5 inch milling and place the 1.5 inch inlay on the outside lanes and portion of outside shoulder. Place DGA shoulder wedge where necessary to eliminate shoulder edge drop-offs and place asphalt seal coat in areas designated by the engineer. Complete pavement striping and outside shoulder rumble strips.

Maintain 12' lane widths at all times except in local areas where the milling and paving operations are active. Maintain 10' lane widths for short durations in the vicinity of the paving operations and restore 12' lanes as soon as practical after milling and/or paving operations are complete in a local area.

Remove lane closures and restore traffic to two lanes on the mainline for any period of time more than 3 days that no work will be performed requiring a lane closure.

PHASE III

Shift traffic to the outside lanes, closing the inside mainline lane to traffic.

Perform the 1.5 inch milling and place the 1.5 inch inlay on the inside lanes and portion of inside shoulder. Place DGA shoulder wedge where necessary to eliminate shoulder edge drop-offs and place asphalt seal coat in areas designated by the engineer. Complete pavement striping and inside shoulder rumble strips.

Maintain 12' lane widths at all times except in local areas where the milling and paving operations are active. Maintain 10' lane widths for short durations in the vicinity of the paving operations and restore 12' lanes as soon as practical after milling and/or paving operations are complete in a local area.

Remove lane closures and restore traffic to two lanes on the mainline for any period of time more than 3 days that no work will be performed requiring a lane closure.

PHASE IV

Using alternating lane closures complete any remaining work including installation of pavement markings, inlaid pavement markers, flexible delineators, final cleanup, etc.

NOTE on Base Failure Repair and Pavement Repair: Once the pavement in these areas has been removed, the contractor must work continuously until the pavement has been replaced. The Engineer may restrict the number of locations being repaired at the same time.

NOTE – WIDE LOADS: Make provisions for wide loads up to 16 feet wide to pass when necessary except during bridge restoration activities.

LANE CLOSURES

Contrary to Section 112.04.17, Lane closures, whether long term or short term, will not be measured for payment and will be incidental to the bid item “Maintain and Control Traffic”. Lane closures must be installed on both inside lanes while work is being performed in the median.

Limit lane closure lengths to no more than 6 miles. Up to two lane closures per direction may be in place at any time given a minimum separation of 2 miles exist between consecutive lane closures.

Remove lane closures and restore traffic to two lanes on the mainline for any period of time more than 3 days that no work will be performed requiring a lane closure.

SIGNS

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted LEFT/RIGHT LANE CLOSED 1 MILE, LEFT/RIGHT LANE CLOSED 2 MILE, LEFT/RIGHT LANE CLOSED 3 MILE, SLOWED/STOPPED TRAFFIC AHEAD, KEEP LEFT/RIGHT. Signage for reduced speed limits and double fine work zones will be furnished, relocated, and maintained by the Contractor.

Contrary to section 112, individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

A quantity of signs has been included for “Roadwork Ahead” signs on entrance ramps, extra double fine signs, keep left/keep right and speed limit signs between interchanges. These are to be paid for only once regardless of how many times they are moved or relocated.

FLASHING ARROWS

Flashing arrows will be paid for once, regardless of how many times they are moved or relocated. The Department **WILL NOT** take possession of the flashing arrows upon completion of the work.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs (PCMS) in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions, or if more than one lane closure is in place in the same direction of travel, provide additional PCMS. Place PCMS one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens relocate or provide additional PCMS so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The locations designated may vary as the work progresses. 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. PCMS will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the signs upon completion of the work.

TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved truck mounted attenuators (TMA) in advance of work areas when workers are present less than 12 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. TMA will not be measured for payment, but are incidental to "Maintain and Control Traffic," Lump Sum. The Department **WILL NOT** take possession of the TMAs upon completion of the work.

PAVEMENT MARKINGS

Remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing or covering and uncovering the lenses, but will be incidental to "Maintain and Control Traffic," lump sum.

Place temporary and permanent striping in accordance with Section 112, Section 713, and Section 714 and Special Note for Grooved all Weather Pavement Markings, except that:

1. Temporary striping will be 6" in width.
2. Edge lines will be required for temporary striping during the lane closures.
3. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic
4. Place permanent striping on bridge decks and pavement within the project limits.
5. Permanent striping will be Durable Type I Tape Markings on bridge decks or other concrete, and will be Thermoplastic on asphalt paving northbound and Grooved all Weather Pavement Markings southbound.
6. Exit gore striping will be Thermoplastic and 12" in width.

Should the Contractor change the existing striping pattern, the Contractor is to restripe the roadway back to its original configuration if no work is anticipated for a period of time (i.e. Winter shutdown).

PAVEMENT EDGE DROP-OFFS

Pavement edge drop-offs will be protected by a lane or shoulder closure. Lane closures will be protected with plastic drums, vertical panels, or barricades as shown on the Standard Drawings.

Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

Less than 2" – Protect with a lane closure.

2" to 4" – Protect with a lane closure. Place plastic drums, vertical panels, or barricades every 50 feet. Cones may not be used in place of plastic drums, panels, and barricades at any time. Construct a wedge with compacted cuttings from milling, trenching, or asphalt mixtures with a 3:1 or flatter slope, when work is not active in the drop-off area. Place Type III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place.

Greater than 4" – Pavement Repair areas – In areas where pavement is to be removed, work should proceed continuously so that traffic is exposed to a drop-off for the minimum amount of time necessary to bring the pavement back up to existing grade. Barrel spacing should be 20 feet and appropriate lighting should be utilized to illuminate the area during nighttime operations.

TRAFFIC COORDINATOR

Designate an employee to be traffic coordinator. The designated Traffic Coordinator must meet the requirements of section 112.03.12 of the Standard Specifications. The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

During any period when a lane closure is in place, the Traffic Coordinator will arrange for personnel to be present on the project at all times to inspect the traffic control, maintain the signing and devices, and relocate portable changeable message boards as queue lengths change. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents.

COORDINATION OF WORK

The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with the work of the other contractors. In case of conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

Do not use or allow employees to use median crossovers at any time except when inside lanes are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

WIDE LOADS

Wide load detours will not be established on this project. Provide for passage of wide loads up to 16 feet. Wide loads may use a portion of the shoulder to allow for passage. Temporarily shift traffic drums to allow for passage of wide loads when necessary.

Wide loads will be prohibited for restoration work requiring half width construction with a temporary concrete barrier. One mile in advance of prior interchange (Exit 9 Northbound, and Exit 28 Southbound), place signs instructing Wide Loads Use US 231. Signs shall be dual mounted and 4' x 8'. Also, place Wide Load Exit Here sign immediately prior to the interchange requiring exit. When applicable, place "Wide Loads Prohibited I-165" signs in advance of interchanges on each side road approach to the applicable interchange. Additional portable changeable message signs quantities have been established to supplement post mounted signs to be used at the direction of the engineer.

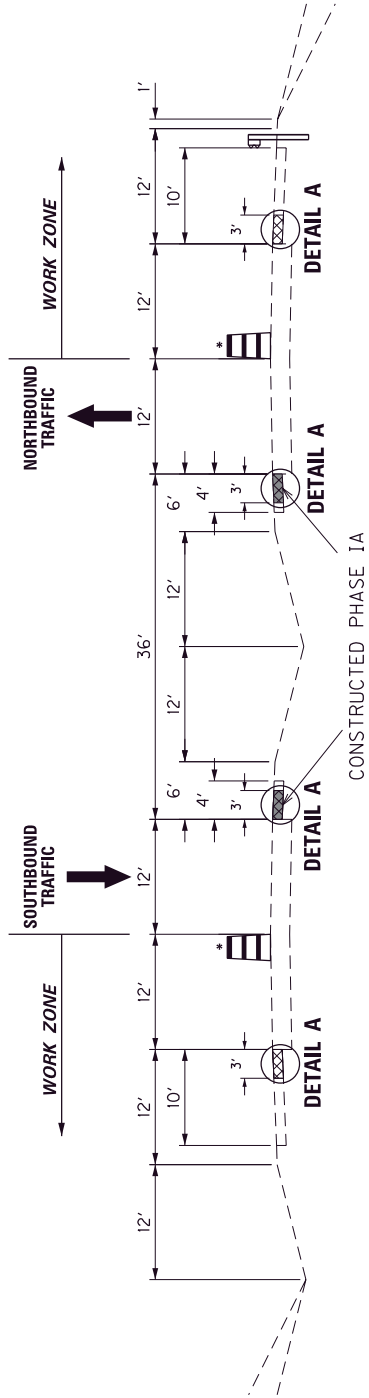
The contractor will be required to provide a minimum of 10 days written notice to the Engineer prior to erection of a lane closure that will restrict passage of wide loads.

M.O.T. TYPICAL SECTIONS

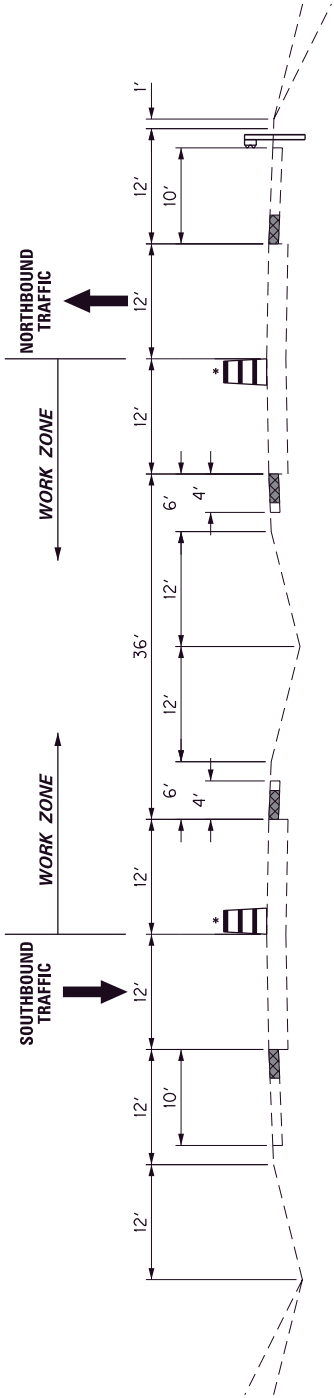
I-165

GASPER RIVER BRIDGE APPROACHES

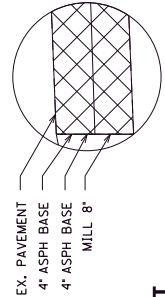
County	Item No.	Sheet
WARREN	3-20019	



PHASE IB



PHASE IC



MOVE DRUM TEMPORARILY WHEN NECESSARY TO ALLOW PAVING EQUIPMENT TO PASS. IMMEDIATELY MOVE DRUMS ONTO NEW ASPHALT AS SOON AS PRACTICAL TO RESTORE LANE WIDTHS.

LEGEND	
	CONSTRUCTED IN PREVIOUS PHASE
	BRIDGE DECK RESTORATION
	PAVEMENT SHOULDER STRENGTHENING

SHOULDER STRENGTHENING PAVEMENT

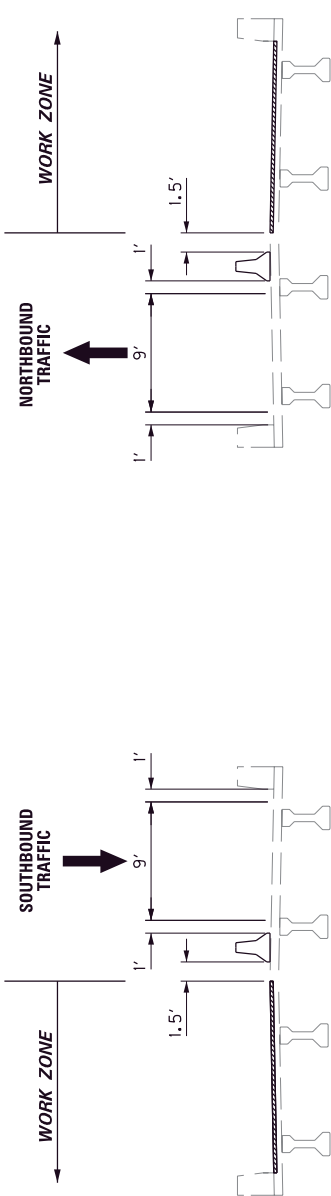
8" MILLING AND TEXTURING
4" - CLASS 3 ASPH BASE 1.0D PG76-22
8" ASPH BASE — 4" - CLASS 3 ASPH BASE 1.0D PG76-22

NOT TO SCALE

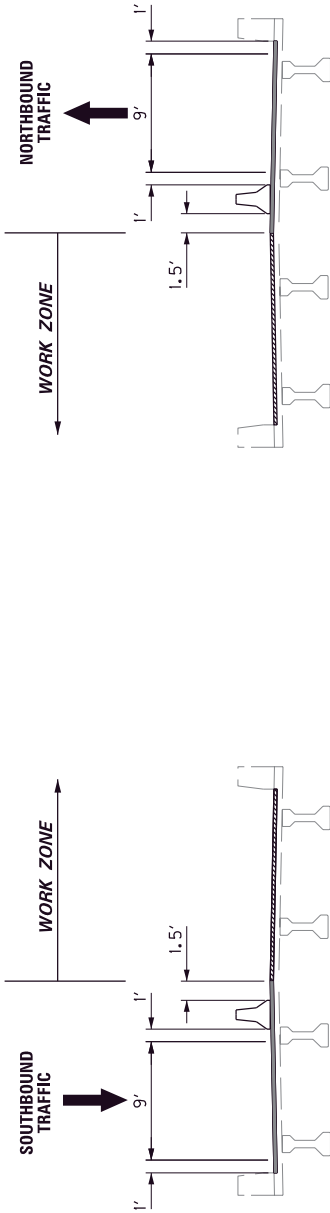
M.O.T. TYPICAL SECTIONS

I-165 OVER GASPER RIVER
MP 13.548 NB & SB

County	Item No.	Sheet
WARREN	3-20019	



PHASE IB



PHASE IC

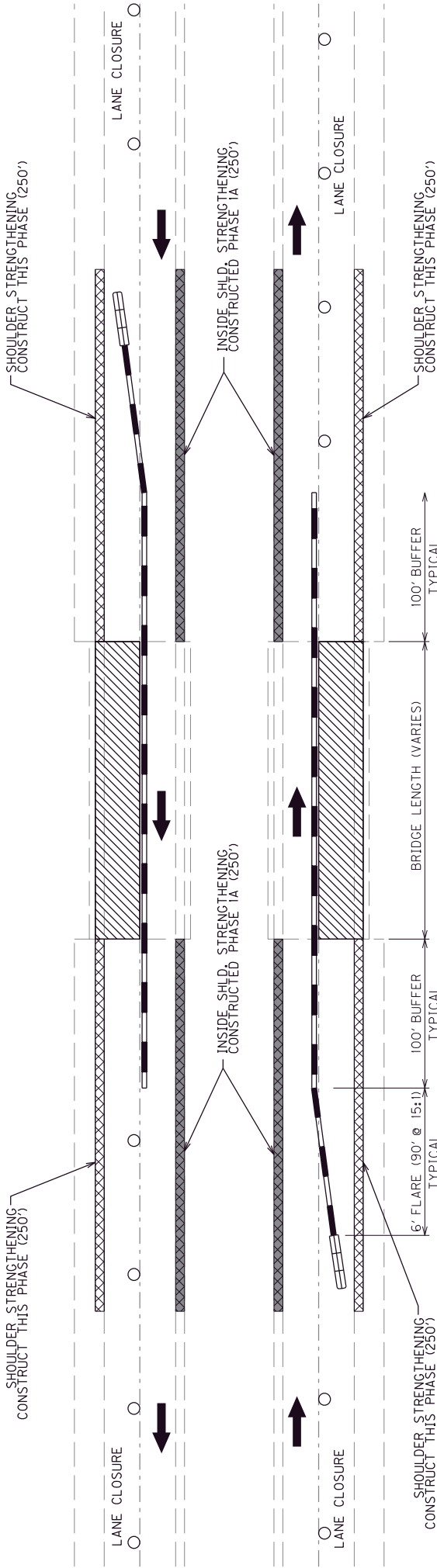
LEGEND

CONSTRUCTED IN PREVIOUS PHASE

MILL AND INLAY

M.O.T. TYPICAL SECTIONS
I-165 OVER GASPER RIVER
MP 13.548 NB & SB
PHASE IB

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WARREN	3-20019	



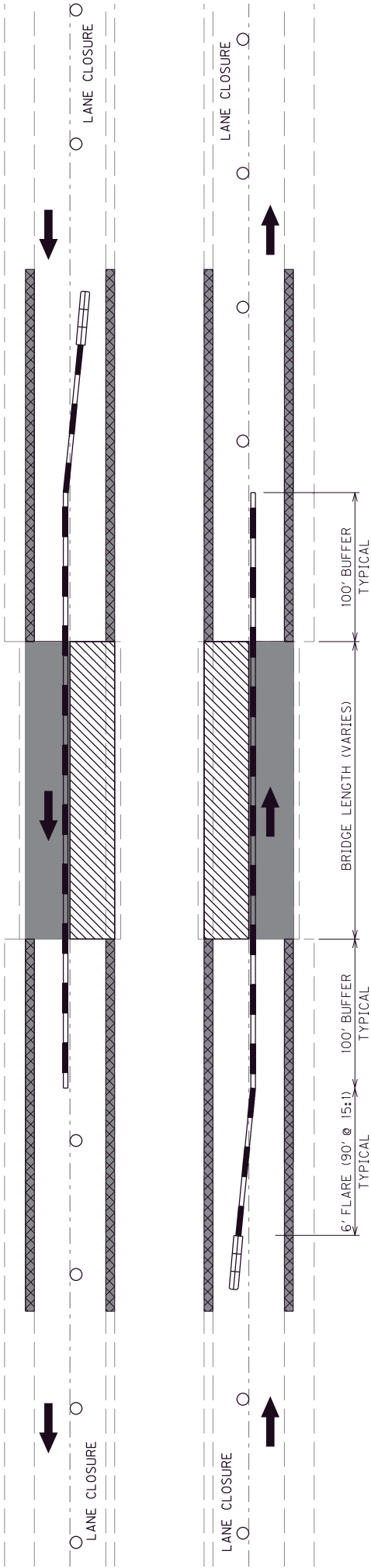
LEGEND

- CONSTRUCTED IN PREVIOUS PHASE
- BRIDGE DECK RESTORATION
- PAVEMENT SHOULDER STRENGTHENING
- CONC MEDIAN BARRIER WALL TYPE 9T
- CRASH CUSHION TY VI CLASS BT TL3
- TRAFFIC DRUMS
- TRAFFIC LANE DIRECTION

NOTE: ALL LANE SHIFTS BASED ON 55:1 TAPER RATE
REDUCE LANE WIDTHS IN ADVANCE OF LANE
SHIFT BASED ON 55:1 TAPER RATE

M.O.T. TYPICAL SECTIONS
I-165 OVER GASPER RIVER
MP 13.548 NB & SB
PHASE IC

County	Item No.	Sheet
WARREN	3-20019	



LEGEND

- CONSTRUCTED IN PREVIOUS PHASE
- BRIDGE DECK RESTORATION
- PAVEMENT SHOULDER STRENGTHENING
- CONC MEDIAN BARRIER WALL TYPE 9T
- CRASH CUSHION TY VI CLASS BT TL3
- TRAFFIC DRUMS
- TRAFFIC LANE DIRECTION

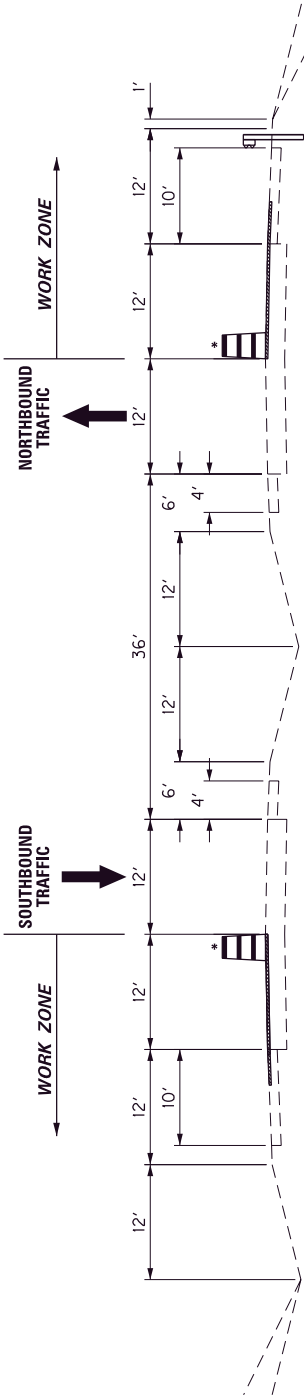
NOTE: ALL LANE SHIFTS BASED ON 55:1 TAPER RATE
REDUCE LANE WIDTHS IN ADVANCE OF LANE
SHIFT BASED ON 55:1 TAPER RATE

M.O.T. TYPICAL SECTIONS

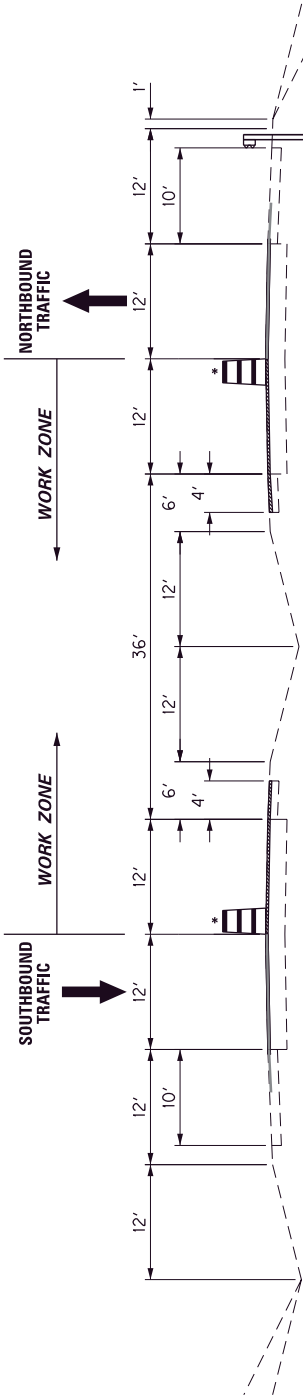
I-165

MP 7.823 SB & 7.842 NB TO MP 18.167 NB & SB

County	Item No.	Sheet
WARREN	3-20019	



PHASE II



PHASE III

LEGEND

- CONSTRUCTED IN PREVIOUS PHASE
- MILL AND INLAY

*
MOVE DRUM TEMPORARILY WHEN NECESSARY
TO ALLOW PAVING EQUIPMENT TO PASS.
IMMEDIATELY MOVE DRUMS ONTO NEW ASPHALT
AS SOON AS PRACTICAL TO RESTORE LANE WIDTHS.

**I-165
Warren County
NHPP IM 0165 (005)
FD52 114 0165 007-019
Item No. 3-20019
MP 7.823 TO MP 18.167**

**THIS PROJECT IS A FULLY
CONTROLLED ACCESS HIGHWAY**

I. DESCRIPTION

Perform all work in accordance with the Department's 2012 Standard Specifications, Supplemental Specifications, Applicable Special Provisions, and Applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

(1) Maintain and Control Traffic; (2) Drainage structure work; (3) Asphalt Base Repairs, (4) Remove and replace Guardrail and Guardrail End treatments; (5) Asphalt Pavement and Milling and Texturing; (6) Pavement markers and markings; (7) Erosion Repairs and Grading Slopes (8) Bridge Restoration Work (9) All other work specified as part of this contract.

II. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the 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. **Pavement Markings -6 inch.** Use Thermoplastic Pavement Markings for permanent striping on asphalt northbound. Use Durable Type 1 Tape for concrete surfaces. See Special Note for Grooved All Weather Pavement Markings for permanent markings southbound.
- C. **Channel Lining Class III.** Channel lining will be limestone and is to be placed at

pipe outlets and in ditch repair locations as directed by the Engineer.

- D. **Inlaid Pavement Markers.** Furnish and install markers in accordance with the “Special Note for Inlaid Pavement Markers”.
- E. **Asphalt Material for Tack Non-Tracking.** See Special Note for Non Tracking Tack Coat.
- F. **Clean Sinkhole.** Furnish Crushed Aggregate #2 and Geotextile Fabric Type IV for restoration of sinkhole openings subsequent to cleaning.
- G. **Joint Adhesive.** See “Special Note for Longitudinal Pavement Joint Adhesive”
- H. **Asphalt Emulsion for Fog Seal.** See Special Note for Fog Seal.
- I. **Concrete Beam Repair.** See Special Note for Concrete Beam Repair.
- J. **Grooved All Weather Markings.** See Special Note.

III. CONSTRUCTION METHODS

- A. **Maintain and Control Traffic.** See Traffic Control Plan. Use waterblasting methods only for striping removal when necessary in lieu of abrasive or other methods.
- B. **Site Preparation.** Be responsible for all site preparation. Do not disturb existing signs. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration, temporary and permanent erosion and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer.
- C. **Disposal of Waste.** Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor. The contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads will not be allowed. No separate payment will be made for obtaining the necessary permits, but will be incidental to the other items of the work. Disposal of existing cuttings and brush shall adhere to Section 202 of the current Standard Drawings.
- D. **Final Dressing, Clean Up, and Seeding and Protection.** After all work is completed, completely remove all debris from the job site. Perform Class A Final Dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. I and use erosion control blanket in lieu of “Seeding and Protection” in all

seeding applications. Install erosion control blanket in all ditching areas not receiving aggregate channel lining.

Additional borrow material may be needed for regrading slopes in pipe extension locations that are intended for elimination of guardrail. The Contractor may suggest potential borrow locations from the right of way to be approved by the engineer. Use only soil material suitable for sustaining vegetation.

- E. **Guardrail.** Remove guardrail where necessary to perform erosion repairs, construction of wedge curb or other activities. Replace guardrail as soon as practical at the conclusion of the work requiring the removal of the guardrail. Remove guardrail permanently in locations in which pipe extensions and regrading of slopes eliminate warrants for guardrail.
- F. **Pavement Striping and Inlaid Pavement Markers.** Permanent striping will be in accordance with Section 112 for temporary striping, 714 for Durable Type I Tape, and Section 714 for Thermoplastic Markings, except that:
 - (1). Striping will be 6" in width, except 12" in gore areas.
 - (2). Permanent striping or temporary striping will be in place before a lane is opened to traffic.
 - (3). Pavement Markers shall be installed per Standard Drawings TPM-105-02 (Arrangement C), TPM-125-02, TPM-130-02 and TPM-135-02, and Special Note for Inlaid Pavement Markers.
 - (4). Northbound permanent striping will be conventional thermoplastic markings. Southbound permanent striping will be Grooved All Weather Pavement Markings constructed in accordance with the Special Note for Grooved All Weather Pavement Markings.
- G. **On-Site Inspection.** In accordance with section 102.06, each Contractor submitting a bid for this work will make a thorough inspection of the site prior to submitting a bid and will thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.
- H. **Caution:** Information shown on the drawings and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information above.

- I. **Utility Clearance.** It is not anticipated that 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.
- J. **Joint Adhesive.** See “Special Note for Longitudinal Pavement Joint Adhesive”.
- K. **Roadway Excavation, Embankment in Place, or Borrow Excavation.** Perform any necessary incidental excavation and grading necessary to complete all items of work. Additional material may be needed to regrade slopes in guardrail elimination locations. Soil materials may be obtained from the right of way by methods that will not induce erosion or cause surrounding material to become unstable. The engineer may require a proposed plan for potential borrow sites, indicating the existing and proposed resulting surface conditions. Dress and permanently seed any proposed borrow sites as soon as practical at the conclusion of borrow activities.
- L. **Crushed Aggregate No. 2.** Crushed Aggregate No. 2 will be used to refill sinkholes after cleaning and for slope protection at shoulder erosion repair areas.
- M. **Remove Paved Ditch.** As individually approved by the engineer, paved ditches that are required to be removed due to failure or damage, may be broken into fragments no greater than 1 foot diameter and reshaped and allowed to remain in place. The ditches must be regraded, filling any voids, and the broken concrete used in the same manner as channel lining. The broken concrete will be supplemented by a 1 – 2 feet thick application of Channel Lining Class III as directed by the engineer.
- N. **Clean Sinkhole.** Remove brush, debris, garbage and soil to the approximate limits of the detail for Clean Sinkhole or as modified or directed by the engineer. Line the excavated slopes with Geotextile Fabric Type IV and backfill with Crushed Aggregate No. 2. Some sinkholes were identified on right of way with a suggested cone of excavation limits. The engineer reserves the right to increase or decrease the amount of excavation required for each sinkhole treated and reserves the right to add additional locations for treatment or eliminate treatment of areas listed.

Dispose of any trash or other required materials at a public landfill.
- O. **Asphalt Emulsion for Fog Seal.** See Special Note for Fog Seal.
- P. **Concrete Wedge Curb.** See Detail. The contractor may elect to remove guardrail to access the work site. For locations with sound existing asphalt shoulder, remove the existing wedge curb, if present, place dowels and longitudinal reinforcement, and construct new concrete wedge curb on the existing asphalt shoulder pavement. For locations in which the existing shoulder is damaged and incapable of providing an adequate foundation for placement of concrete wedge curb, saw cut the existing

shoulder pavement to provide a neat line for removal, remove the failed asphalt shoulder material, backfill with DGA to an elevation 8" below the existing shoulder surface and place dowels, and place an 8" thick foundation of Class A concrete and construct concrete wedge curb on the Class A concrete foundation in accordance with the detail.

Q. **Concrete Beam Repair.** See Special Note for Concrete Beam Repair.

R. **Grooved All Weather Markings.** See Special Note.

IV. METHOD OF MEASUREMENT

- A. **Maintain and Control Traffic.** See Traffic Control Plan. Only the bid items listed will be measured for payment. No measurement or payment for striping removal or removal or covering of existing pavement marker lenses will be made and will be considered incidental to "Maintain and Control Traffic". No measurement or payment will be made for removal of existing striping and will be considered incidental to "Maintain and Control Traffic". Maintenance and repairs of damages to shoulders used as temporary travel lanes caused by the application of traffic, will be considered incidental to "Maintain and Control Traffic" with no separate measurement or payment.
- B. **Site Preparation.** Other than the bid items listed, site preparation will not be measured for payment, but will be incidental to the other items of work.
- C. **Erosion Control.** Erosion control items will be measured and paid in accordance with the Standard Specifications for Road and Bridge Construction. No direct measurement for seeding will be made as the seeding is incidental to the erosion control blanket in accordance with the specifications.
- D. **Pavement Repair.** Pavement repair areas shall be bid "Milling and Texturing" per ton and all asphalt mixtures paid per ton and consists of all labor, equipment and materials necessary to complete the repairs as shown in the detail provided in the proposal. Locations and quantities will be determined in the field by the engineer. Quantities for this item may be increased, reduced or eliminated at the discretion of the engineer.
- E. **Remove Existing Paved Ditch.** Removal of paved ditches will be measured by the square yard and will include the measured quantity that are broken, reshaped, supplemented by channel lining and allowed to remain on the project as approved by the engineer
- F. **Removal of Wedge Curb.** If wedge curb is encountered in a shoulder repair area or to be replaced with concrete wedge curb or flume, removal of the existing wedge curb will be considered incidental to other items on the contract. Preparation of a

- suitable base for the proposed wedge curb in areas of damaged shoulder will be considered incidental to the linear feet of wedge curb. See detail.
- G. **Joint Adhesive.** See “Special Note for Longitudinal Pavement Joint Adhesive”.
- H. **Grooved All Weather Markings.** See Special Note.
- I. **Roadway Excavation, Embankment in Place, or Borrow Excavation.** No direct measurement will be made for Roadway Excavation, Embankment in Place or Borrow Excavation as these items will be considered incidental to other items of work. Approximate quantities of earthwork required for pipe extensions and regrading of slopes at the guardrail elimination locations is 124 CY EXC, 206 CY EMB. Quantities for other items of work may also be required and are not included in these quantities.
- J. **Inlaid Pavement Markers.** Inlaid pavement markers are to be measured in accordance with the “Special Note for Inlaid Pavement Markers”. No direct payment will be made for the removal of the existing pavement markers prior to the milling operation and shall be considered incidental to milling and texturing.
- K. **Clean Sinkhole.** The bid item “Clean Sinkhole” will be considered full compensation for accessing the site and preparing the site for excavation and disposal of debris. Measurement of each individual site treated per each will be made. Geotextile fabric and Crushed Aggregate #2 used for backfill will be measured and paid in accordance with the specifications. Excavation limits required will be determined in the field by the engineer as work progresses. Excavation and disposal of soil, boulders, or debris will be considered incidental to the Crushed Aggregate #2 backfill. No adjustment in unit price for “Clean Sinkhole” will be considered for alteration in excavation limits as directed by the engineer.
- L. **Asphalt Emulsion for Fog Seal.** See Special Note for Fog Seal.
- M. **Concrete Wedge Curb.** The item “Concrete Wedge Curb will be measured by the linear feet of concrete wedge curb placed. Removal of existing wedge curb will be considered incidental to “Concrete Wedge Curb” with no separate measurement or payment. If the engineer determines the existing shoulder is damaged and incapable of providing a suitable foundation for the proposed concrete wedge curb, the required saw cut, removal of existing shoulder materials, placement of the required 8” thick Class A concrete foundation, and any other items not specifically listed as a pay item on the Concrete Wedge Curb Detail will be considered incidental to the per linear feet of “Concrete Wedge Curb” placed.
- N. **Concrete Beam Repair.** See Special Note for Concrete Beam Repair.

V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at his expense. Payment will be made in accordance with the KYTC Standard Specifications, current edition with supplemental specifications and current Standard Drawings unless otherwise specified herein.

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Site Preparation.** Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.
- C. **Pavement Markers and Permanent Striping.** See Traffic Control Plan, Standard Specifications and “Special Note for Inlaid Pavement Markers”.
- D. **Temporary Striping.** Contrary to Section 714.04.01, the Department **WILL** measure temporary paint used for interim markings for Thermoplastic Paint applications.
- E. **Lane Closures.** Contrary to Section 112, lane closures will not be measured for payment but will be incidental to the bid item “Maintain and Control Traffic”. Arrow boards, portable message boards, Type III barricades, and signs shall be paid for one time regardless of how many times they are moved.
- F. **Ditching and Shouldering.** In accordance with Section 209 of the Standard Specifications, the bid item “Ditching and shouldering” includes ditching on both sides of the roadway and the median for the entire length of the project. Cleaning of all drainage structures, including perforated pipe headwalls and pipe structures 36 inches in diameter or less is also included in this bid item. In addition to Section 209.04.06 shouldering shall include all materials required to complete the shoulder repairs as shown in the shoulder repair detail except the bid items listed for payment on the shoulder repair detail. Approximate locations for this repair is shown on the shoulder repair detail.
- G. **Remove Existing Paved Ditch.** The removal of the existing paved ditch shall be paid for as “square yards” and shall include the breaking and reshaping of the existing concrete in preparation for installation of the Class III Channel Lining.
- H. **Milling and Texturing.** Milling and texturing will be paid for per section 408.05 of the 2012 Standard Specifications. No direct payment will be made for disposal of millings.
- I. **Waterblasting Striping Removal.** Waterblasting Striping Removal will be required for all striping removal applications and will be considered incidental to “Maintain and Control Traffic”.

- J. **Joint Adhesive.** See “Special Note for Longitudinal Pavement Joint Adhesive”
- K. **Asphalt Emulsion for Fog Seal.** See Special Note for Fog Seal.
- L. **Asphalt Material for Tack Non-Tracking.** See Special Note for Non Tracking Tack Coat.
- M. **Roadway Excavation, Embankment in Place, or Borrow Excavation.** No direct payment will be made for Roadway Excavation, Embankment in Place or Borrow Excavation as these items will be considered incidental to other items of work. Approximate quantities of earthwork required for pipe extensions and regrading of slopes at the guardrail elimination locations is 124 CY EXC, 206 CY EMB. Quantities for other items of work may also be required and are not included in these quantities.
- N. **Concrete Beam Repair.** See Special Note for Concrete Beam Repair.
- O. **Grooved All Weather Markings.** See Special Note.

**I-165
Warren County
NHPP IM 0651 (102)
FD52 114 0165 007-019
Item No. 3-20019**

MP 7.823 TO MP 18.167

1. This project is intended to provide a thin mill and inlay to provide a new mainline riding surface through the length of the project. Mainline pavement will be milled and inlaid extending 4' into the outside shoulder and will include mill and inlay of the entire width of inside shoulder.
2. The dimensions shown on the typical section for pavement and shoulder widths and thickness are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless otherwise specified in the Proposal.
3. The contractor is to be advised of the locations of overhead utility wires on the project. The following locations are approximate:

Mile 7.155	Mile 15.000
Mile 7.278	Mile 15.100
Mile 7.609	Mile 16.198
Mile 8.118	Mile 16.554
Mile 8.199	Mile 16.897
Mile 8.625	
Mile 8.976	
Mile 9.708	
Mile 10.443	
Mile 10.498	
Mile 10.649	

CAUTION: Other overhead utility locations may exist. These and all other utilities should be avoided on this project. If any utility is impacted, it will be the contractor's responsibility to contact the affected utility and cover any costs associated with the impact.

4. The contractor is advised that the planned locations of work established by milepoints are referenced from the Kentucky Transportation Cabinet's Official Route Log. The existing reference markers may not correspond to the established work locations.
5. Quantities of guardrail removal and installation of new guardrail have been established for areas requiring removal for shoulder erosion repair work. The contractor will place traffic drums on 20' spacing in the areas and pin down exposed blunt ends until such time that guardrail is re-established. Either a lane

closure or shoulder closure shall be in place at any time that a section of guardrail is not in place.

6. The Contractor shall deliver existing salvaged guardrail system materials to the Central Sign Shop and Recycle center at 1224 Wilkinson Blvd in Frankfort, KY. Contact Section Supervisor at (502) 564-8187 to schedule the delivery of material. Deliver the material between the hours of 8:00AM and 3:30PM, Monday through Friday. There is a Guardrail Delivery Verification Sheet which must be completed and signed by the Contractor, Engineer and a representative of the Central Sign Shop and Recycle Center. A copy of this sheet is included elsewhere in the proposal.
7. Flexible Delineators shall meet the requirements of Section 830 and 838 of the Standard Specifications, and be placed in accordance with Section 3D of the M.U.T.C.D., current edition.
8. This project requires the use of a Material Transfer Vehicle. In accordance with Section A of 403.03.05.
9. The speed limit on the project will be reduced to 55 mph while lane closures are in place. Any time work is suspended the speed limit will revert back to 70 mph. Also, double fine signs are set up in the project to be installed while workers are present in the work zone.
10. Areas throughout the project have slopes that are eroding significantly. These areas shall be repaired in accordance with the "Slope Repair Detail" as shown elsewhere in the proposal. The repair locations listed may be lengthened, shortened, or eliminated by the Engineer. Locations and quantities for this item of work is shown on the "Slope Repair Detail". Additionally, some areas have been identified to receive a concrete wedge curb with flume outlets to mitigate slope erosion.
11. The existing paved median U-turns within the project limits will be resurfaced.
12. The contractor will be allowed to access median U-turns and cross the median provided proper lane closures of the inside lanes are utilized at the entry and exit locations at the contractor's expense. Use only short duration lane closures and remove lane closures when median U-turn access is not needed.
13. Quantities of Channel Lining Class III have been included to be used in eroded areas around pipe inlet/outlets or in ditches to be repaired as directed and/or approved by the Engineer. The actual limits of the channel lining will be as directed and/or approved by the Engineer. Geotextile Fabric Type I, as outlined in Section 214 of the Standard Specifications, will not be measured for payment and will be considered incidental to channel lining.

14. The contractor is to take care not to damage any existing roadway signs. Any roadway signs that are damaged during construction are to be replaced at the contractor's expense in accordance with section 105.08 of the standard specifications.
15. The contractor is to take care not to damage any existing light poles and wiring. Any light poles or wiring that is damaged during construction is to be replaced at the contractor's expense in accordance with section 105.08 of the standard specifications.
16. The cleaning of existing pipe culvert inlets and outlets 36 inches or less in diameter are incidental to the bid item for "Ditching and Shouldering" in accordance with Section 209 of the 2012 Edition of the Standard Specifications for Road and Bridge Construction. This includes the cleaning of existing perforated pipe headwalls.
17. Areas established as pavement repair locations will be replaced as directed by the Engineer. After the contractor has closed the roadway the Engineer will mark the areas to be repaired. The engineer reserves the right to increase, decrease, or eliminate this item of work based on the field conditions encountered.
18. Any embankment and backfill for the culvert pipe installation is incidental to the respective bid item. Roadway Excavation, Borrow Excavation, or Embankment in place required to regrade slopes where designated for guardrail elimination will be considered incidental to other items of work.
19. A quantity of remove pipe has been estimated for removal and replacement of small drainage structures. Remove only the amount needed for the repair. Replace pipe with the same materials as the existing pipe to be connected. Use metal bands for corrugated metal pipe tie-ins and remove concrete pipe to the nearest bell or spigot and bell up the new section if possible. If pipe cannot be connected by bell and spigot or by pipe bands, the contractor may seal the connection area and place a concrete collar with a minimum 12 inch thickness in any direction at his own expense. Verify size, length and type of pipe prior to ordering precast small drainage structures and replacement pipe.
20. Any embankment and backfill for the culvert pipe installation or small drainage structure installation is incidental to the respective bid item installed.
21. Quantities of Asphalt Seal Coat and Seal Aggregate, and DGA base have been established to wedge and eliminate greater than 1 inch drop offs. Due to the inconsistent nature of the slopes outside the paved shoulder, and due to the existence of existing guardrail, application of asphalt seal coat will not be practical in all locations. The intent is to provide a DGA wedge to eliminate dropoff situations and to re-establish the typical stone shoulder width where needed and where practical to do so.

22. The right of way on this project may contain sinkholes that accept drainage on the project. The ability of these sinkholes to accept surface water is vital to maintaining drainage on the project. Proposed treatment of these sinkholes is not intended to plug or eliminate the sinkhole's ability to accept surface water but is merely to clean soil and debris from the inlet to expose voids and cavities and to backfill and replace with an open graded stone capable of allowing surface water to pass through and into the sinkhole. See detail sheets for proposed quantities, locations and limits of treatment. Actual limits of excavation and backfill and identification of sinkholes to be treated will be determined by the engineer as field conditions warrant.
23. Existing mainline outside shoulders are to be milled and inlaid 4' wide and the entire inside paved shoulder width will be milled and inlaid. The remaining shoulder width that is not scheduled to be milled and inlaid is to be treated with an asphalt emulsion fog seal. See typical sections and Special Note for Fog Seal for details.
24. Coordinate activities of any adjacent contracts with this contract. A project is currently in progress to upgrade the Natcher Parkway (I-165) to interstate standards.
25. Details and quantities have been included for bridge restoration of the Bridge over Gasper River. The pay items listed in the details and summaries will be considered full compensation for all items of work required to complete the bridge restoration work.

REFERENCES

- 1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012.
- 2. FHWA Manual on Uniform Traffic Control Devices – 2009 Edition.
- 3. Kentucky Department of Highways Standard Drawings, Current Edition, as applicable:

BGX-09-04	BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS
RBI-002-07	TYPICAL GUARDRAIL INSTALLATIONS
RBI-003-09	TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A
RBM-020-09	DELINEATORS FOR CONCRETE BARRIERS
RBM-115-10	CONCRETE BARRIER WALL TYPE 9T (TEMPORARY)
RBR-005-11	GUARDRAIL COMPONENTS
RBR-010-06	GUARDRAIL TERMINAL SECTIONS
RDB-105-06	SLOPED AND FLARED BOX INLET-OUTLET 18”-24”-30”-36” ALL SKEWS
RDB-106-05	GRATES FOR SLOPED AND FLARED BOX INLET-OUTLET
RDD-040-05	CHANNEL LINING CLASS II AND III
RDD-021-07	FLUME INLET TYPE 2
RDH-110-02	PIPE CULVERT HEADWALLS
RDH-030-03	SLOPED AND PARALLEL HEADWALLS 12”-21” PIPE
RDH-210-03	DIMENSIONS AND QUANTITIES, 30” TO 108” HEADWALS, CIRCULAR PIPE, 0 DEGREE SKEW
RDI-001-010	CULVERT, ENTRANCE AND STORM SEWER PIPE TYPES AND COVER HEIGHTS
RDI-002-05	CULVERT, ENTRANCE AND STORM SEWER PIPE TYPES AND COVER HEIGHTS
RDI-003-05	CULVERT & STORM SEWER PIPE TYPES AND COVER TYPES
RDI-004-04	CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS
RDI-020-09	PIPE BEDDING FOR CULVERTS ENTRANCE AND STORM SEWER PIPE
RDI-021-01	PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER REINFORCED CONCRETE PIPE
RDI-025-05	PIPE BEDDING TRENCH CONDITION
RDI-026-01	PIPE BEDDING TRENCH CONDITION REINFORCED CONC. PIPE
RDI-035-02	COATING, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE
RDI-040-01	EROSION CONTROL BLANKET SLOPE INSTALLATION
RDI-041-01	EROSION CONTROL BLANKET CHANNEL INSTALLATION
RDP-001-06	PERFORATED PIPE TYPES AND COVER HEIGHTS
RDP-010-09	PERFORATED PIPE HEADWALLS
RDX-160-06	SECURITY DEVICES FOR FRAMES, GRATES AND LIDS
RDX-210-03	TEMPORARY SILT FENCE
RDX-220-05	SILT TRAP - TYPE A
RDX-225-01	SILT TRAP - TYPE B
RDX-230-01	SILT TRAP - TYPE C

RFW-006-07	WOVEN WIRE FENCE TYPE 1
RGS-002-06	SUPERELEVATION FOR MULTI-LANE PAVEMENT
RGX-001-06	MISCELLANEOUS STANDARDS
RGX-010-04	TYPICAL EMBANKMENT FOUNDATION BENCHES
TPM-105-03	PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS
TPM-110-03	PAVEMENT MARKER ARRANGEMENTS FOR MULTI-LANE ROADWAYS
TPM-170	FLEXIBLE DELINEATOR POST ARRANGEMENTS FOR HORIZONTAL CURVES
TTC-115-03	LANE CLOSURE MULTI-LANE HIGHWAY CASE I
TTC-120-03	LANE CLOSURE MULTI-LANE HIGHWAY CASE II
TTC-135-02	SHOULDER CLOSURE
TTC-160-02	TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR LANE CLOSURES
TTD-120-02	WORK ZONE SPEED LIMIT AND DOUBLE FINE SIGNS
TTS-110-01	MOBILE OPERATION FOR PAINT STRIPING CASE III
TTS-115-02	MOBILE OPERATION FOR PAINT STRIPING CASE IV
TTS-120-02	MOBILE OPERATION FOR DURABLE STRIPING CASE 1

4. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012, Appendix B - Supplemental Specifications, as applicable:

Special Note	Typical Section Dimensions <i>attached</i>
Special Note	Portable Changeable Message Signs <i>attached</i>
Special Note	Before You Dig <i>attached</i>
Special Note	Fixed Completion Date and Liquidated Damages <i>attached</i>
General Note	Asphalt Pavement Ride Quality <i>attached</i>
General Note	Compaction of Asphalt Mixtures <i>attached</i>
Special Note	Asphalt Milling and Texturing <i>attached</i>
Special Note	Special Note for Inlaid Pavement Markers <i>attached</i>
Special Note	Special Note for Significant Project <i>attached</i>
Special Note	Special Note for Intelligent Compaction of Asphalt Mixtures <i>attached</i>
Special Note	Special Note for Paver Mounted Temperature Profiles <i>attached</i>
Special Note	Special Note for Fog Seal <i>attached</i>
Special Note	Guardrail Delivery Verification Sheet <i>attached</i>
Special Note	Special Note for Longitudinal Pavement Joint Adhesive <i>attached</i>
Special Note	Special Note for Non-Tracking Tack Coat <i>attached</i>
Special Note	Special Note for Bridge Restoration and Waterproofing with Concrete Overlays <i>attached</i>
Special Note	Special Note for HMA Electronic Delivery Management System (HMA e-Ticketing) <i>attached</i>
Special Note	Special Note for Concrete Beam Repair <i>attached</i>
Special Note	1-122 Special Note for Expedite Work Order
Special Note	Special Note for Grooved All Weather Pavement Markings

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS
I-165
WARREN COUNTY
ITEM NO. 3-20019

The dimensions shown on the typical sections for pavement and shoulder widths are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened or narrowed **EXCEPT** where specified elsewhere in the Proposal.

SPECIAL NOTE FOR BEFORE YOU DIG

**I-165
WARREN COUNTY
ITEM NO. 3-20019**

Call 1-800-752-6007 toll free a minimum of two and no more than ten business days prior to excavation for information on the location of existing under-ground utilities which subscribe to the before-u-dig (BUD) service. Coordinate excavation with all utility owners, including those who do not subscribe to BUD.

Special Note for Fixed Completion Date and

Liquidated Damages

I-165 WARREN COUNTY ITEM NO. 3-20019

Contrary to Section 108.09, Liquidated Damages of \$5,000 per calendar day will be assessed for each day work remains incomplete beyond the Specified Project Completion Date. This project has a Fixed Project Completion Date of October 31, 2019.

Additionally, the contractor will be required to complete all bridge restoration work requiring reduced lane widths for the bridge over Gasper River within 28 consecutive Calendar Days. The contractor may choose the starting date for this work. Calendar Days will be tracked and charged from the time that traffic lanes are narrowed for the installation of the temporary barrier wall until such time that the contractor completes all items of work associated with the bridge restoration and waterproofing (both northbound and southbound structures), removes temporary barrier wall and restores traffic to 4-12' lanes. Failure to complete all bridge restoration and waterproofing work for the both northbound and southbound Gasper River Bridges and restoration of traffic to 4-12' lanes, within 28 consecutive Calendar Days will result in an agreed upon penalty in the amount of \$5,000 per day. Liquidated Damages in the amount of \$5,000 per day will be charged for each Calendar Day over the allowed 28 consecutive Calendar Days that bridge restoration work for either the northbound or the southbound structure remains incomplete or traffic remains in the restricted lane configuration for these items of work.

All penalties or Liquidated Damages will be assessed cumulatively, and charged concurrently when applicable.

Also contrary to Section 108, liquidated damages will be charged during the months of December through March.

**SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING
I-165
WARREN COUNTY
ITEM NO. 3-20019**

Do not allow public traffic to drive on the milled surface.

The Contractor will take possession of the millings except the Department will retain 500 tons of milling to be delivered to the Warren County Maintenance Facility, 2160 Three Springs Road, Bowling Green, KY 42104. Delivery of the 500 tons to be retained by the Department to the Warren County Maintenance Facility will be considered incidental to the item "Asphalt Pavement Milling and Texturing" and no additional measurement for delivery of this material will be made.

Removal of the existing pavement markers prior to the milling operation is considered incidental to the bid item "Asphalt Pavement Milling and Texturing".

SPECIAL NOTE FOR INLAID PAVEMENT MARKERS

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and applicable Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. This work shall consist of:

- (1) Maintain and Control Traffic; and (2) Furnish and install Inlaid Pavement Markers (IPMs) in recessed grooves; and (3) Any other work as specified by these notes and the Contract.

II. MATERIALS

The Department will sample all materials in accordance with the Department's Sampling Manual. 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 unless otherwise specified in these Notes.

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Markers.** Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer's current recommendations for adhesives and installation procedures. Use one brand and design throughout the project. Use markers meeting the specifications in the table below.

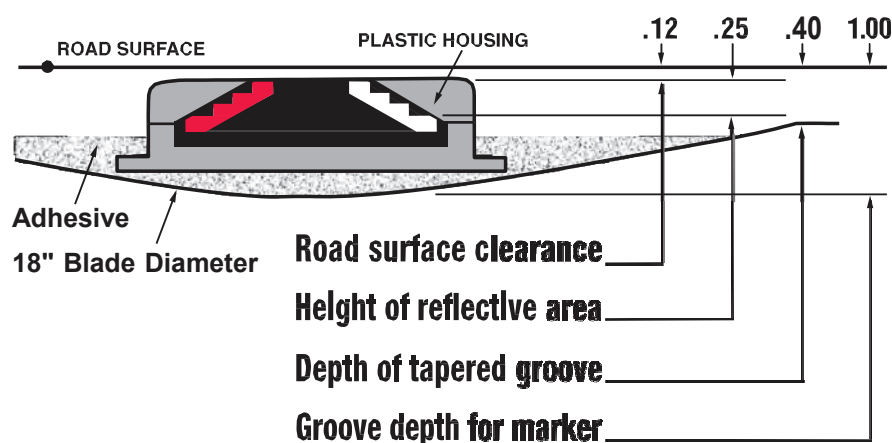
SPECIFICATIONS FOR HOUSING AND REFLECTOR	
Material:	Polycarbonate Plastic
Weight:	Housing 2.00 oz.
	Reflector 2.00 oz.
Housing Size:	5.00" x 3.00" x 0.70" high
Specific Intensity of Reflectivity at 0.2° Observation Angle	
White:	3.0 at 0° entrance angle
	1.2 at 20° entrance angle
Yellow:	60% of white values
Red:	25% of white values

- C. **Adhesives.** Use adhesives that conform to the manufacturer's recommendations.

III. CONSTRUCTION

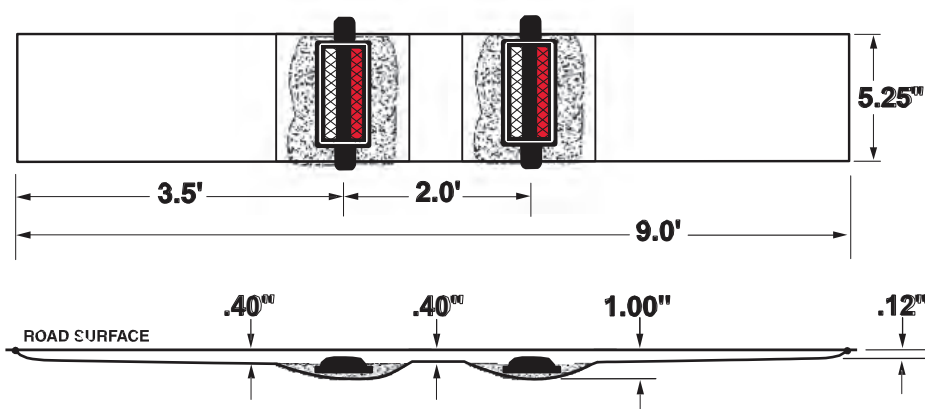
- A. Experimental Evaluation.** The University of Kentucky Transportation Center will be evaluating this installation of IPMs. Notify the Engineer a minimum of 14 calendar days prior to beginning work. The Engineer will coordinate the University's activities with the Contractor's work.
- B. Maintain and Control Traffic.** See Traffic Control Plan.
- C. Installation.** Install IPMs in recessed grooves cut into the final course of asphalt pavement according to the manufacturer's recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent tearing or raveling. Cut installation grooves using diamond blades on saws that accurately control groove dimensions. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

Prepare the pavement surfaces, and install the markers in the recessed groove according to the drawing below. Use an approved snowplowable epoxy adhesive. Ensure that the adhesive bed area is equal to the bottom area of the marker, and apply adhesive in sufficient quantity to force excess out around the entire perimeter of the marker. Use materials, equipment, and construction procedures that ensure proper adhesion of the markers to the pavement surface according to the manufacturer's recommendations. Remove all excess adhesive from in front of the reflective faces. If any adhesive or foreign matter cannot be removed from the reflective faces, or if any marker fails to properly adhere to the pavement surface, remove and replace the marker at no additional cost to the Department.



- D. Location and Spacing.** Install the markers in the pattern for high reflectivity with two (2) IPMs per groove. Locate and space markers as shown in the current standard drawings or sepias (note: use Inlaid Pavement Markers wherever Type V Pavement Markers are called for). Do not install markers on bridge decks. Do not install a marker on top of a pavement joint or crack. Offset the recessed groove a minimum of 2

inches from any longitudinal pavement joint or crack and at least one inch from the painted stripe, ensuring that the finished line of markers is straight with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.



Place inlaid markers as much in line with existing pavement striping as possible. Place markers installed along an edge line or channelizing line so that the near edge of the plastic housing is no more than one inch from the near edge of the line. Place markers installed along a lane line between and in line with the dashes. Do not place markers over the lines except where the lines deviate visibly from their correct alignment, and then only after obtaining the Engineer's prior approval of the location.

If conflicts between recessed groove placement in relation to pavement joint and striping cannot be resolved, obtain the Engineer's approval to eliminate the marker or revise the alignment.

- E. Disposal of Waste.** Dispose of all removed asphalt pavement, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.
- F. Restoration.** Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.
- G. On-Site Inspection.** Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.
- H. Caution.** Do not take information shown on the drawings and in this proposal and the types and quantities of work listed as an accurate or complete evaluation of the material and conditions to be encountered during construction, but consider the types

and quantities of work listed as approximate only. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation or extension of Contract time if the conditions encountered are not in accordance with the information shown.

IV. MEASUREMENT

- A. Maintain and Control Traffic.** See Traffic Control Plan.
- B. “INLAID PAYMENT MARKER”** shall be measured as each. One (1) installation of “INLAID PAVEMENT MARKER” will consist of grooving the pavement, removing asphalt cuttings and debris, preheating pavement to remove moisture, adhesives, and installation of two (2) markers with all lenses in accordance with this note.

Note: Each pay item of Inlaid Pavement Marker will require two markers.

V. PAYMENT

- A. Maintain and Control Traffic.** See Traffic Control Plan.
- B. Inlaid Pavement Markers.** The Department will make payment for the completed and accepted quantity of completely installed “INLAID PAVEMENT MARKERS” at the Contract unit price, each. Accept payment as full compensation for all labor, equipment, materials, and incidentals to accomplish this work to the satisfaction of the Engineer. A system of one (1) groove and two (2) markers shall be paid as one “INLAID PAVEMENT MARKER”. The bid item “INLAID PAVEMENT MARKER” shall be used regardless of the color and type of lenses required.

SPECIAL NOTE FOR FOG SEAL

Except as provided herein, conform to all requirements of KYTC 2012 Standard Specifications for Road and Bridge Construction. Section references are to the Standard Specifications. Prior to placing fog seal, the area to be sealed shall be cleaned according to Section 405. Use either CSS-1h or SS1h applied at a rate of 0.12 – 0.15 gallons per square yard. The recommended emulsions are to be in accordance with Section 806 of the 2012 Standard Specifications.

Uniformly apply the asphalt emulsion with an asphalt distributor or approved equipment in accordance with Section 406.03.03b except apply at the rates specified herein. Contrary to Section 406.03.03b, apply emulsion undiluted only.

Adjust operations as necessary and as directed by the engineer to achieve complete, uniform coverage of the application. Correct areas of incomplete coverage by hand spraying or by a second application of material as approved by the engineer.

Payment will be based on the accepted, weighed tons of undiluted emulsion applied as specified. Payment per ton of “Asphalt Emulsion for Fog Seal” will be full compensation for all labor, materials, and equipment necessary to prepare the surface for treatment, application of the emulsion, corrective work, and protection of the emulsion until cured.

SPECIAL NOTE FOR NON-TRACKING TACK COAT

1. DESCRIPTION AND USAGE. 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 ¹ , %	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

¹ 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. As required by the manufacturer, ensure the spray bar is equipped with #1 or #2 ¼” V-slot Etnyre nozzles. Other nozzles are not acceptable. Arrange the nozzles in the following patterns from left to right:

Nozzle number(s)	Activity	Orientation
1	On	Vertical
2	Off	-
3	On	Horizontal
4 & 5	Off	-
6	On	Horizontal
Continue 2 off and 1 on pattern through rest of spray bar system.		

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 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.

3.2 Non-tracking Tack Application. Ensure the roadway temperature is a minimum of 40 °F and rising during the application of the tack. This material is not suitable for use in colder temperatures. Prior to applying the tack, 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 initial heating to 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 rate of 0.50 pounds (0.06 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. If full coverage is not achieved, material application rate may be increased to ensure full coverage. Do not heat material more than twice in one day.

3.3 Non-tracking Tack Certification. Furnish the tacks 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 adhesive. 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. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

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

Code
24970EC

Pay Item
Asphalt Material for Tack Non-Tracking

Pay Unit
Ton

April 30, 2018

SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove the existing overlay or machine prep the existing slab; (3) Complete full-depth and partial depth repairs as directed by the Engineer; (4) Repair/replace damaged and corroded reinforcing bars; (5) Place new concrete overlay and epoxy-sand slurry in accordance with Section 606; (6) Complete asphalt approach pavement; (7) Maintain and control traffic; and (8) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

- A. Latex Concrete.** See Section 606.03.17.
B. Class "M" Concrete. Use either "M1" or "M2". See Section 601.
C. Bituminous Asphalt. Use CL4 ASPH SURF 0.50A PG76-22
D. Epoxy-Sand Slurry. See Section 606.03.10.

III. CONSTRUCTION.

- A. Machine Preparation of Existing Slab.** See Section 606.03.03. See Special Note for Use of Hydrodemolition Method.
B. Partial Depth Slab Repair. Remove areas determined to be unsound by the Engineer via Hydrodemolition or via hand held jackhammers weighing less than 40 lbs. No wrecking balls, drop hammers, or rig-mounted breakers are allowed. Repair/Replace all damaged or severely corroded reinforcing bars prior to partial depth repair operation. The Department will not measure material removal and will consider this work incidental to the bid item "PARTIAL DEPTH PATCHING".
C. Surface Texturing. Texture the concrete surface of the overlay in accordance with Section 609.03.10.

IV. MEASUREMENT. See Section 606 and the following:

- A. Latex Modified Concrete (1 1/2 inches thick).** The Department will measure the quantity in cubic yards.
B. Latex Modified Concrete for Partial Depth Patching. The Department will measure the quantity in cubic yards by deducting the theoretical volume of bridge deck overlay (LMC) from the total volume (as indicated by the batch quantity tickets) of Concrete required to obtain the finished grade shown on the Plans or established by the Engineer.
C. Machine Preparation of Existing Slab. The Department will measure the machine preparation of the existing slab in square yards, which shall include all labor, equipment, and material needed to complete this work.

- D. Steel Reinforcement.** The Department will measure any reinforcing steel necessary for the partial or full depth patch in pounds, which shall include all labor, equipment, and material needed to complete this work.
- V. PAYMENT.** See Section 606 and the following:
- A. Latex Modified Concrete (1 1/2 inches thick).** The Department will make payment for the Latex Modified Concrete under bid item #08534 "CONCRETE OVERLAY – LATEX" for the quantity in cubic yards complete in place.
- B. Latex Modified Concrete for Partial Depth Patching.** The Department will make payment for the Partial Depth Patching under bid item #02110 "PARTIAL DEPTH PATCHING". Payment will be for the quantity per cubic feet complete in place.
- C. Machine Preparation of Existing Slab.** The Department will make payment for the preparation of the existing slab under bid item #08551 "MACHINE PREPARATION OF EXISTING SLAB". Payment will be for the square yard complete.
- D. Steel Reinforcement.** The Department will make payment for additional steel reinforcement, if necessary, under bid item #08150 "STEEL REINFORCEMENT". Payment will be at the unit price per pound.

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

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

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

II. MATERIALS.

- A. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- B. Structural Steel.** Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. See Standard Drawing BJE-001, current edition.
- C. Stud Anchors.** The armored edge stud anchors are $\frac{3}{4}$ " x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- D. Steel Reinforcement.** Use Grade 60. See Section 602.
- E. Epoxy Bond Coat.** See Section 511.
- F. Neoprene Joint Sealers (Compression Seals).** See Section 807.02.02.
- G. Neoprene Strip Seals.** See attached detail drawings.

III. CONSTRUCTION.

- A. Remove Existing Materials.** Remove the existing expansion dam/bridge end and specified areas of concrete as shown on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Replacement" or "Armored Edge for Concrete".

Clean and leave all existing steel reinforcement encountered in place.

- B. Place New Concrete and Armored Edges.** After all specified existing materials have been removed; place new armored edges to match the grade of the proposed overlay or to match the original grade (See attached detail drawings). Place the new Class "M" concrete to the scarified grade and finish to receive the new overlay or place the new Class "M" concrete to the original grade and finish with broom strokes drawn transversely from curb to curb.

All new structural steel shall be cleaned and painted with two coats of commercial primer paint red orange in color, except that surfaces to come in contact with concrete are not to be painted.

Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an

- epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.
- C. Additional Steel Reinforcement.** Furnish for replacement, as directed by the Engineer, 1200 linear feet of steel reinforcing bars 1/2" diameter by 20' lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Do not place any additional steel reinforcement above the height of the top row of Nelson Studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete. Deliver unused bars to the Local County Maintenance Barn. Payment will be made in accordance with Section 602.
 - D. Stage Construction.** Installation of concrete and armored edges in two (or more if specified) stages is necessary. Join the armored edges at or near the centerline of the roadway or lane line, field weld and grind smooth.
 - E. Preformed Neoprene Joint Seal.** Place the preformed compression joint seal in one continuous, unbroken length. Place neoprene compression seals as recommended by the manufacturer and in accordance with Section 609.03.04 (D). Place neoprene strip seals as recommended by the manufacturer and in accordance with Section 609.03.04 (E), except that shop drawings will not be required.
 - F. Shop Plans.** Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. MEASUREMENT.

- A. Expansion Joint Replacement- X".** The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.
- B. Armored Edge for Concrete.** The Department will measure the quantity in linear feet from gutterline to gutterline along the face of the bridge end.
- C. Steel Reinforcement.** See Section 602.

V. PAYMENT.

- A. Expansion Joint Replacement- X".** Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete, neoprene joint seal, and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this note and as shown on the attached detail drawings.
- B. Armored Edge for Concrete.** Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this note and as shown on the attached detail drawings.
- C. Steel Reinforcement.** See Section 602.
The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.

SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

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

Description

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

Equipment

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

Mechanical Scarifying Equipment. The scarifying equipment shall be a power operated mechanical scarifier capable of uniformly scarifying or removing the old concrete or asphalt wearing surface from the bridge deck to the depths required in the plans or as directed by the Engineer. The equipment shall be self-propelled with sufficient power, traction and stability to maintain accurate depth of cut and slope. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing the existing bridge deck by means of a ski or matching shoe, or from an independent grade control; in addition, it shall be equipped with an integral loading means to remove the material being cut from the bridge deck and to discharge the cuttings into a truck all in a single operation.

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

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

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

Power Driven Hand Tools. Power driven hand tools and jackhammers will be permitted, but shall not be heavier than the nominal 35 lb class. Chipping hammers shall not be heavier than the nominal 15 lb class. Only hand chipping tools shall be used when removing concrete within 1 in. of reinforcing steel. Mechanically driven tools shall be operated at a maximum angle of 45 degrees from the bridge floor surface.

Construction Methods

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

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

Preparation of Existing Deck

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

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

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

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

Removal of Existing Asphaltic Concrete Overlays

If an existing asphaltic concrete overlay is present upon the original bridge deck surface to be prepared by Hydrodemolition, the overlay and any waterproofing material that was part of the deck must be removed, and the bridge deck cleaned, prior to commencement of the Hydrodemolition operation. The Contractor may utilize conventional scarifying equipment conforming to these specifications to remove the existing bituminous overlay and waterproofing material from the original bridge deck. Acceptable depth of scarification shall be the overlay and waterproofing material thickness plus X" below the original bridge deck surface. Additional removal depth of existing deck concrete is permitted by mechanical scarification provided. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

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

Removal of Existing Modified Concrete Overlays

If an existing modified concrete overlay is present upon the original bridge deck surface to be prepared by Hydrodemolition, the overlay material that was part of the deck must be removed, and the bridge deck cleaned, prior to commencement of the Hydrodemolition operation. The Contractor may utilize conventional scarifying equipment conforming to these specifications to remove the existing concrete overlay from the original bridge deck. Acceptable depth of scarification shall be the overlay thickness plus X" below the original bridge deck surface. Additional removal depth of existing deck concrete is permitted by mechanical scarification provided. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

Existing overlay material which is sound and bonded may be left in patch areas with approval of the Project Engineer. If determined the existing patches are to be removed, jackhammers, not to be heavier than the nominal 35 lb class shall be used to remove debonded areas.

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

Bridge Decks with No Existing Concrete Overlay

If Hydrodemolition is to be performed on an original bridge deck surface without a bituminous or concrete bridge deck overlay, the Contractor may use mechanical scarification equipment conforming to these specifications to remove an initial portion of the hydro-demolition depth. The scarification depth shall be 1/4". Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

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

Concrete Removal by Hydro-Demolition

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

With the use of Hydrodemolition surface preparation, the requirement to provide a minimum 3/4" clearance around all reinforcing steel that is more than 50% exposed is waived, providing that the existing concrete is sound. The amount of steel exposed shall be kept to a minimum.

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

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

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

The Engineer shall verify the following settings:

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

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

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

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

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

The Contractor shall provide shielding, as necessary, to insure containment of all dislodged concrete within the removal area in order to protect the public from flying debris both on and under the work site.

Cleaning

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

Resounding

After the Hydrodemolition operation has completed the removal, and the deck is cleaned and allowed to dry, the deck shall be resounded to assure that the all unsound concrete deck material has been removed. The final sounding of the deck shall be done by the Engineer and shall be performed only when the entire deck is completely dry. In no case shall the final sounding be made unless the deck is dry and frost-free. Final sounding shall consist of as many successive resounding as required to ensure that all deteriorated and fractured concrete has been removed. Additional removal shall be performed with 35 lb maximum weight jackhammers operated at an angle of no more than 45 degrees from horizontal. Aerosol spray paint for outlining and sounding chains shall be provided by the Contractor.

Full Depth Repair

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

Preparation Prior to Overlay Placement

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

Method of Measurement

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

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

Surface Preparation Using Hydrodemolition shall be measured as the actual deck area in square yards overlaid and shall include the costs of surface preparation, Hydrodemolition, *W'* (min.) milling into the original concrete bridge deck surface, removal of the surface preparation debris, cleaning, any incidental materials, and all labor and equipment as necessary to complete the work as described in this specification, but not specifically included in other items for payment.

Full Depth Repair when encountered on a bridge deck and marked in the field by the Engineer, full depth repair shall be paid for per Cubic Yard of Class M Concrete used.

Basis of Payment

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

Item	Unit	Description
08510	Square Yard	REM EPOXY BIT FOREIGN OVERLAY
02110	Cubic yard	PARTIAL DEPTH PATCHING

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

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

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

1.0 DESCRIPTION. Incorporate a GPS Fleet Management System for all HMA delivered to the project in order to monitor, track, and report loads of HMA during the construction processes from the point of measurement and loading to the point of incorporation to the project.

2.0 MATERIALS AND EQUIPMENT. Submit to the Engineer for approval, no fewer than 30 days prior to HMA placement activities, a GPS fleet management system supplier that can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verifications, and data management and processing as needed during the Project to maintain equipment.

Provide operator settings, user manuals, training videos, and required viewing/export software for review. Provide equipment that will meet the following:

1. A wireless fleet management or GPS device that is capable of tracking all delivery trucks (both company-owned and third-party) must be installed on all trucks and equipment (dump trucks, belly dumps, side-load dumps, transfer vehicles, pavers, or any other trucks/vehicles) used to transfer and incorporate HMA into the project. KYTC personnel shall have the ability to access Real Time monitoring through the use of a mobile device such as an iPad, smartphone, etc.
2. The fleet management system shall be fully integrated with the Contractor's Load Read-Out scale system at the HMA plant site.
3. The fleet management system shall have the ability to measure and track vehicles and their contents (weights and material types) continuously from the plant site to the project site. The system shall have internal battery backup capabilities due to loss of power, and have the ability to store data if GPS connectivity is lost and transmit that same data when unit re-establishes connectivity. To be considered continuous, no two data points shall be more than 60 seconds apart unless the vehicle is stopped. Duration of stop time for any reason shall be recorded.

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

A. Construction Requirements

1. Install and operate equipment in accordance with the manufacturer's specifications.
2. Verify the GPS is working within the requirements of this Special Note.

B. Data Deliverables

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

1. Real-time Continuous Data Items

Provide the Engineer access to a GIS map-based data viewer which displays the following information in real-time with a web-based system compatible with iOS and Windows environments.

- Each Truck
 - UniqueTruck ID
 - Truck status
 - Time At Source
 - Time At Destination
 - Time At Paver
 - Time At Scale
 - Time to and from plant/job
 - Time Stopped with Engine Running
 - Time of last transmission
 - Location (Latitude and Longitude in decimal degrees to nearest 0.0000001) every 60 seconds
 - Description of Material being transported (i.e. asphalt base, asphalt surface)
 - Mix Design Number
 - Net Weight of material being transported to the nearest 0.01 ton
 - Running Daily Total of Net Weight of material being transported to nearest 0.01 ton.
 - Project Number
- Scale Location
- Project Location
- Point of Delivery (i.e. paver)

2. Daily Summary

The following summary information shall be provided to the Engineer electronically within 4 hours of beginning operations on the next working day

- For each Material
 - List of Individual Loads
 - Contractor Name
 - Project Number
 - Unique Truck ID
 - Net Weight For Payment (nearest 0.01 tons)
 - Date
 - Mix Temperature at Time of Loading, Fahrenheit (to be key entered by plant)
 - Time Loaded
 - Time Unloaded
 - Delivery Location (Latitude/Longitude in decimal degrees to nearest 0.0000001)
- For each Bid Item
 - Total Quantity for Payment (nearest 0.01 tons)

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

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

1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.
2. Delays due to GPS satellite reception of signals or equipment breakdowns will not be considered justification for contract modifications or contract extensions.
3. Payment will be full compensation for costs related to providing the GPS system, including all equipped pavers and transfer vehicles, integration with plant load-out systems, and any software required for the construction and reporting process. All quality control procedures including the GPS systems representative’s technical support and on-site training shall be included in the Contract lump sum price.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24986EC	HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM	LS

SPECIAL NOTE FOR CONCRETE BEAM REPAIR

- I. **Materials.** Use materials for vertical and overhead repair patching from the List of Approved Materials for **Vertical and Overhead Repair Patch**. Meet all requirements listed. Use a Type V epoxy contact adhesive meeting requirements of Section 826 of the Specifications.
- II. **Construction.** Prepare surface for patching in accordance with Section 510.03.01 with the exception that materials used will be cementitious materials specified above. Using methods approved by the engineer, square the interface of the existing concrete around the spalled area resulting in a neat line of patching material and squared corners. After thorough cleaning by sand blasting or other approved methods, apply epoxy contact adhesive immediately prior to application of the cementitious patching material. Mix and apply patching materials in accordance with the manufacturer's specifications. Form or tool patching materials to provide a smooth, uniform surface restoring the concrete surface to the approximate original shape. Grind smooth any resulting irregularities. Cure materials in accordance with the manufacturer's specifications. See attached TS#6, Trouble Shooting Corner Spalls or Corner Cracks.
- III. **Measurement.** Concrete Beam Repair will be measured by the square feet along the vertical face of the beam in the longitudinal direction with mainline. No additional measurement of the end face or bottom face will be measured for patches that extend and include portions of the end or bottom face of beam.
- IV. **Payment.** Measurement and payment of the item "Concrete Beam Repair", will include all labor, equipment and materials necessary to remove unsound materials, chip, grind and clean the area to be patched, apply epoxy contact adhesive and mix, place and cure the vertical and overhead repair patching materials.

TS #6

TROUBLE SHOOTING CORNER SPALLS OR CORNER CRACKS

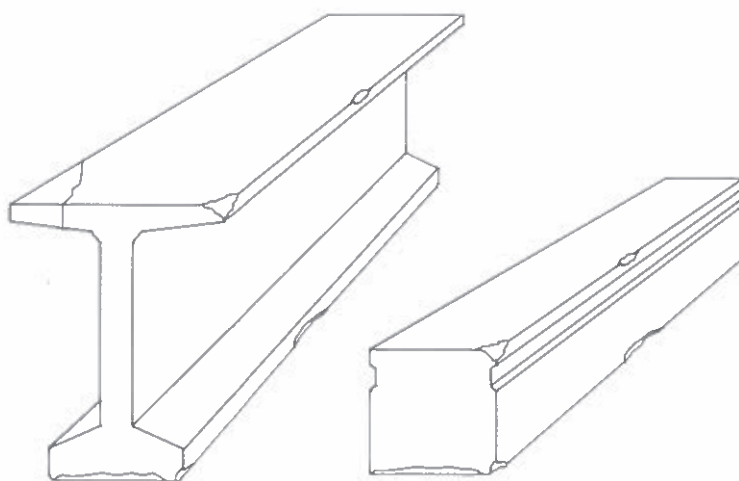
Description – These spalls and cracks can be found at any right angle surfaces of flanges along the beam

ENGINEERING EFFECTS

1. Corner spalls in top flanges used as the riding surface of the completed bridge require repair to insure sufficient live load capacity and durability
2. Corner spalls in bearing areas of beams should be repaired to insure proper bearings as well as to protect strands from water and salt intrusion when beam ends are adjacent to expansion joints.
3. Corner spalls in the bottom flange that may significantly reduce protection from salt and water spray from traffic underneath or leaking grouted joints from above, such as side-by-side boxes and deck bulb-t's, should be repaired
4. Top flange edges incorporated into slab pours need not be repaired

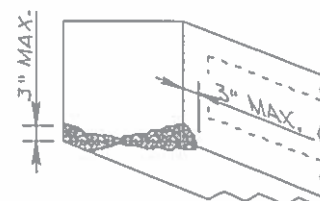
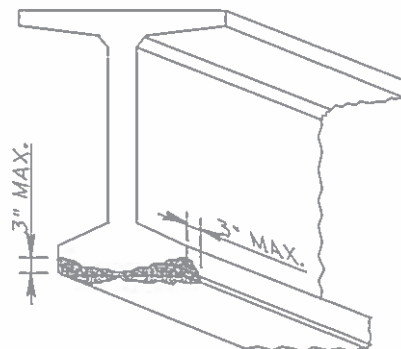
REPAIR CONSIDERATIONS

1. Where corner spalls are deemed in need of repair, the repairs should be made in accordance with Standard Repair Procedures #3 or #4
2. Corner spalls on edges to be incorporated into composite slab or end diaphragms may not need repair
3. Minor spalls that do not compromise protection from water, salt spray or humidity, or are not exposed to direct view need not be repaired



STANDARD REPAIR PROCEDURE #3 FOR NON-CONFINED BEARING AREA SPALLS

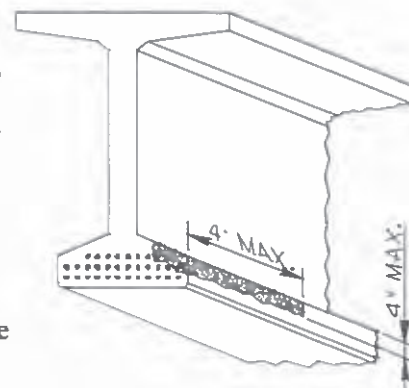
- A. Remove all loose concrete.
- B. Square interface with existing concrete to be in contact with the patch, to the extent practical. Take care to not damage any mild reinforcement or prestressing strands.
- C. Clean the excavated area, blowing away dust.
- D. Repair Option 1 – Fill the spall area with approved polymer modified cementitious, shrinkage-compensated patching material, with a compressive strength equal or greater than the specified design strength of the beam. Pre-packaged patching material is preferred to control quality.
- D. Repair Option 2 – Coat surface to be adhered to with an approved bonding agent, following the manufacture's instructions. Fill the spall area with a high strength, cement based, shrinkage-compensated mortar, following the manufacture's instructions.
- E. In cases where the patch is located over vehicular traffic or pedestrian walkways, the patching material must be mechanically anchored either by encapsulating existing reinforcement, be anchored by supplemental reinforcement, or by other anchoring devices.



NOTE: With the prior approval of the owner/engineer, spalls in the end regions of the beam, within the bounds stated herein, may be patched, in the presence of the owner's inspector without submitting the repair for formal approval. Repairs of spalls larger than shown herein will require submission of a repair plan to the owner/engineer for approval.

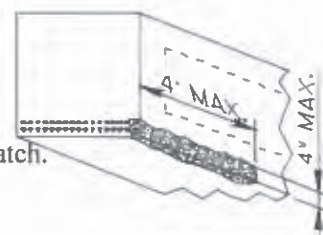
STANDARD REPAIR PROCEDURE #4 FOR SPALLS AND VOIDS IN THE BOTTOM FLANGE THAT EXPOSE PRESTRESSING STRAND

NOTE: This repair applies only to those voids which do not exceed 4 inches in depth, 4 feet in length and expose no more than 2 strands, and when no more than one spall or void appears in a given section of the girder. A section is defined as $\frac{1}{4}$ the length of the girder. No two such spalls or voids shall have their closest dimensions nearer than two beam depth apart. With the prior approval of the owner/engineer, this repair may be made, in the presence of the owners inspector without submitting the repair for formal approval.



Repairs at beam ends should be made after detensioning because any repairs made prior to detensioning will most likely fail due to high transfer stresses.

Repairs away from beam ends should be made prior to detensioning so that precompression stresses are induced in the patch material



- A. Remove all loose concrete.
- B. Square interfaces with existing concrete to be in contact with the patch.
- C. Clean the excavated area, blowing away dust.
- D. Repair Option 1 – Fill the voided area with approved polymer modified cementitious, shrinkage-compensated patching material, with a compressive strength equal or greater than the specified design strength of the beam. Prepackaged patching material is preferred to control quality.
- E. Repair Option 2 – Coat surface to be adhered to with an approved bonding agent, following the manufacture's instructions. Fill the voided area with a high strength, cement based, shrinkage-compensated mortar, following the manufacture's instructions.
- F. Detensioning should not occur until the patch reaches the specified compressive release strength.
- G. For larger spalls of a similar nature and/or involving more strands, the same repair techniques may be employed but must be submitted to the owner/engineer for evaluation and approval.
- H. In cases where the patch is located over vehicular traffic or pedestrian walkways, the patching material must be mechanically anchored either by encapsulating existing reinforcement, be anchored by supplemental reinforcement, or by other anchoring devices.

SPECIAL NOTE FOR GROOVED ALL WEATHER PAVEMENT MARKINGS

1. DESCRIPTION. Furnish and install a wet retroreflective pavement marking system in accordance with this special note. Project will include use of thermoplastic striping. Striping (both edge and skip lines) shall include specified elements to provide wet retroreflectivity. Lines shall be installed in a shallow groove to protect retroreflective elements.

2. THERMOPLASTIC STRIPING. Thermoplastic pavement markings shall comply with Sections 714 and 837 of the Department of Highways' Standard Specifications for Road and Bridge Construction, unless otherwise noted. Contrary to Section 714 of the Standard Specifications, thermoplastic striping shall be a minimum thickness of 100 mils. Striping shall include specified elements to provide wet retroreflectivity.

Gaps in the edge lines, as outlined in the Subsection 714.03.01 of the Standard Specifications for Road and Bridge Construction, will not be necessary since striping will be recessed below the surface.

3. WET REFLECTIVE ELEMENTS. Wet reflective beads shall be one of the following products:

- 3M Connected Roads All Weather Elements
- Potters Visimax Highway Glass Bead System

The color of the wet reflective beads shall match the color of the line being applied. Traditional and wet reflective beads shall be applied in a double-drop application of traditional glass beads and wet reflective optical elements. Contractor shall follow manufacturer's recommendations as to incorporating wet reflective elements into the striping operation. Apply traditional beads and wet reflective elements in sufficient quantities to obtain the dry retroreflectivity requirements and desired wet retroreflectivity levels. A 50/50 ratio of traditional beads to wet reflective elements is recommended, but bead distribution may be modified with the approval of the engineer, if the contractor feels that a different distribution is necessary to meet dry/wet retroreflectivity levels.

The manufacturer of the wet reflective bead shall have a factory representative on site before the contractor begins striping operations. The factory representative shall assure the engineer that the wet reflective system has been calibrated for proper application before the contractor begins. The factory representative shall remain available to periodically assure the engineer the system is being applied according to the manufacturer's recommendations. A random sample of wet reflective elements shall be provided to the Division of Materials before use on the project.

4. PLACEMENT IN GROOVE. In an attempt to protect the retroreflective elements, striping shall be installed in shallow grooves. Contractor shall follow bead manufacturer's recommendations regarding grooving applications.

Grooves shall be a minimum of 2" from any longitudinal pavement joint. The groove shall not be

installed on concrete surfaces or in other areas identified by the Engineer. The groove shall not be installed continuously for intermittent pavement markings, but only where markings are to be applied.

Grooves shall be 1 inch \pm ¼ inch wider than the pavement marking material. Groove depth shall be 150 mils \pm 5 mils, unless otherwise approved by the Engineer. Depth shall be consistent across the full width of the groove. Depth plates shall be provided by the Contractor to the Engineer to assure that desired groove depth is achieved.

Grooves that are ground deeper or wider than the specified allowable limits shall be repaired per the direction of the Engineer at no additional cost. Grooves that are ground too shallow, too narrow, or with unacceptable rises between blade cuts shall be reground to the correct size, depth, and surface finish at no additional cost. Slots ground out of alignment shall be patched using an approved method and materials.

Prior to cutting out the grooves for all recessed lines, the Contractor shall use a chalk line or other suitable method to layout the proposed pavement markings on the surface course so that the Engineer can inspect the locations.

Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. If water is used to clean the groove or the grooving process takes place during rainfall, a minimum of 24 hours of dry time is required prior to the placement of pavement markings.

After the depth, width, length, and surface condition has been approved by the Engineer, grooves shall be cleaned of any fine particles using high-pressure compressed air before application of the striping. The Contractor shall prevent traffic from traversing the grooves and re-clean grooves, as necessary, prior to application of pavement markings at no additional cost to the Department.

5. PAVEMENT MARKING PERFORMANCE. Pavement marking retroreflectivity performance under dry conditions will be evaluated in accordance with the Standard Specifications for Road and Bridge Construction.

The use of wet reflective elements on this project is part of a pilot effort to evaluate potential pavement marking enhancements. As a result, minimum wet retroreflectivity values have been established and will be measured. However, the wet retroreflectivity performance will not be considered as part of the acceptance and payment for pavement striping on this project.

Desired minimum wet recovery retroreflectivity requirements at the end of the proving period (Standard Specifications for Road and Bridge Construction, Section 714.03.06) are as follows:

Retroreflectivity ($\text{mcd}(\text{ft}^{-2})(\text{fc}^{-1})$) {metric equivalent $\text{mcd}(\text{m}^{-2})(\text{lux}^{-1})$ }

	White	Yellow
Wet recovery (ASTM 2177)	250	175
Wet Continuous (ASTM E2832)	150	100

In support of wet retroreflectivity testing, samples of representative markings (both white and yellow) shall be provided on one foot sections of rigid panel (20 gauge aluminum or thicker). Samples shall be taken at the beginning and end of the striping operation (total of two samples per color). Samples shall be protected from damage and submitted to the Division of Materials for testing and record of the project output for the materials used. Lines on the project are subject to future testing to monitor pavement marking performance in the field.

6. MEASUREMENT. Wet retroreflective elements will be incidental to the pay items for pavement striping.

The Department will measure work required for the installation of the recessed groove. The Department will not measure surface preparation and pre-marking of the groove for payment and will consider them incidental to the groove pay item. Corrective work will not be measured for payment.

7. 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>
25019EC	Groove for Pave Striping – 7 IN	LF
25008EC	Pave Striping-Thermo-6 IN W-Wet Reflect	LF
25009EC	Pave Striping-Thermo-6 IN Y- Wet Reflect	LF

March 27, 2019

SPECIAL NOTE FOR INTELLIGENT COMPACTION OF ASPHALT MIXTURES

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

1.0 DESCRIPTION. Provide and use Intelligent Compaction (IC) Rollers for compaction of all asphalt mixtures.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02, a minimum of one (1) IC roller is to be used on the project at all times, two (2) IC rollers will be required when the paving train consists of three (3) or more rollers. The Contractor is to only use the IC roller(s) for compaction as the breakdown and/or intermediate roller(s). All IC rollers will meet the following minimum characteristics:

1. Are self propelled double-drum vibratory rollers equipped with accelerometers mounted in or about the drum to measure the interactions between the rollers and compacted materials in order to evaluate the applied compactive effort. The IC rollers must have the approval of the Engineer prior to use. Examples of rollers equipped with IC technology can be found at www.IntelligentCompaction.com.
2. Are equipped with non-contact temperature sensors for measuring pavement surface temperatures.
3. The output from the roller is designated as the IC-MV which represents the stiffness of the materials based on the vibration of the roller drums and the resulting response from the underlying materials.
4. Are equipped with integrated on-board documentation systems that are capable of displaying real-time color-coded maps of IC measurement values including the stiffness response values, location of the roller, number of roller passes, machine settings, together with the material temperature, speed and the frequency and amplitude of roller drums. Ensure the display unit is capable of transferring the data by means of a cloud based system.
5. Are equipped with a mounted Global Positioning System GPS radio and receiver either a Real Time Kinematic (RTK-GPS) or Global Navigational Satellite System (GNSS) units that monitor the location and track the number of passes of the rollers. Accuracy of the positioning system is to be a minimum of 12 inches. Data is to be transferred to the Cabinet via a cloud based system within 30 minutes of collection.

3.0 WORK PLAN. Submit to the Engineer an IC Work Plan at the Preconstruction Conference and at least 2 weeks prior to beginning construction. Describe in the work plan the following:

1. Compaction equipment to be used including:
 - Vendor(s)
 - Roller model(s),
 - Roller dimensions and weights,
 - Description of IC measurement system,
 - GPS capabilities,
 - Documentation system,
 - Temperature measurement system, and
 - Software.
2. Roller data collection methods including sampling rates and intervals and data file types.
3. Transfer of data to the Engineer including method, timing, and personnel responsible. At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.
4. Training plan and schedule for roller operators, project foreman, project surveyors, and Cabinet personnel; including both classroom and field training. Training should be conducted at least 1 week before beginning IC construction. The training is to be performed by a qualified representative(s) from the IC Roller manufacture(s) to be used on the project. This training shall include how to access and use the data from the cloud data source.

4.0 CONSTRUCTION. Do not begin work until the Engineer has approved the IC submittals and the IC equipment.

Follow requirements established in Section 400 for production and placement, materials, equipment, acceptance plans and adjustments except as noted or modified in this Specification. Provide the Engineer at least one day's notice prior to beginning construction or prior to resuming production if operations have been temporarily suspended. Ensure paving equipment complies with all requirements specified in Section 400. The IC roller temperatures will be evaluated by the Department with the data from a Paver Mounted Infrared Temperature Gauge.

A. Pre-Construction Test Section(s) Requirements.

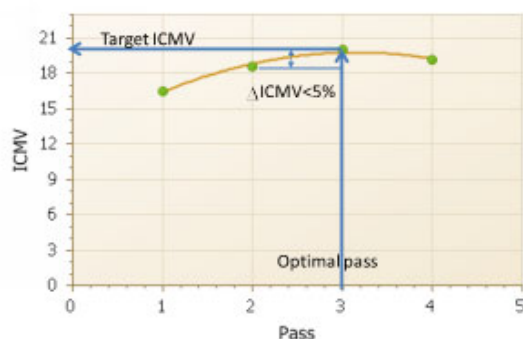
Three to five days prior to the start of production, ensure the proper setup of the GPS, IC roller(s) and the rover(s) by conducting joint GPS correlation and verification testing between the Contractor, GPS representative and IC roller manufacturer using the same datum.

1. Ensure GPS correlation and verification testing includes the following minimum processes:
 - a. Establish the GPS system to be used either one with a base station or one with mobile receivers only. Ensure all components in the system are set to the correct coordinate system; then,
 - b. Verify that the roller and rover are working properly and that there is a connection with the base station; then,
 - c. Record the coordinates of the two edges where the front drum of the roller is in contact with the ground from the on-board, color-coded display; then,
 - d. Mark the locations of the roller drum edges and move the roller, and place the mobile receiver at each mark and record the readings; then,
2. Compare coordinates between the roller and rover receivers. If the coordinates are within 12.0 in. of each other, the comparison is acceptable. If the coordinates are not within 12.0 in., diagnose and perform necessary corrections and repeat the above steps until verification is acceptable.
3. Do not begin work until acceptable GPS correlation and verification has been obtained.
4. The Contractor and the Department should conduct random GPS verification testing during production to ensure data locations are accurate. The recommended rate is once per day with a requirement of at least once per week.
5. All acceptance testing shall be as outlined in Standard Specifications section 400.

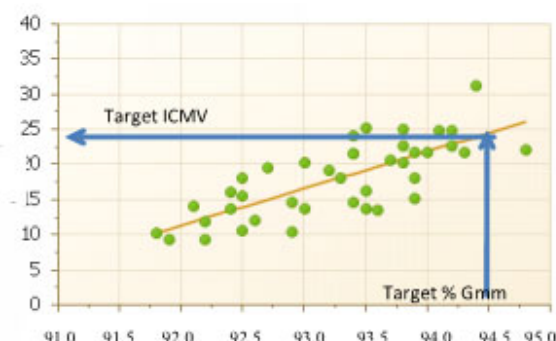
B. Construction Test Section(s) Requirements.

Construct test section(s) at location(s) agreed on by the Contractor and the Engineer within the project limits. The test section is required to determine a compaction curve of the asphalt mixtures in relationship to number of roller passes and to the stiffness of mixture while meeting the Department in-place compaction requirements. All rollers and the respective number of passes for each is to be determined via control strip each time a material change, equipment change or when the Engineer deems necessary.

Conduct test section(s) on every lift and every asphalt mixture. Ensure test section quantities of 500 to 1,000 tons of mainline mixtures. Operate IC rollers in the low to medium amplitude range and at the same settings (speed, frequency) throughout the section while minimizing overlapping of the roller, **the settings are to be used throughout the project with no changes**. After each roller pass, the qualified technician from the contractor observed by the Department will use a nondestructive nuclear gauge that has been calibrated to the mixture to estimate the density of the asphalt at 10 locations uniformly spaced throughout the test section within the width of a single roller pass. The density readings and the number of roller passes needed to achieve the specified compaction will be recorded. The estimated target density will be the peak of the average of the nondestructive readings within the desired compaction temperature range for the mixture. The IC roller data in conjunction with the Veda software will create an IC compaction curve for the mixture. The target IC-MV is the point when the increase in the IC-MV of the material between passes is less than 5 percent on the compaction curve. The IC compaction curve is defined as the relationship between the IC-MV and the roller passes. A compaction curve example is as follows:



Subsequent to the determination of the target IC-MV, compact an adjoining > 250 < 500 tons section using same roller settings and the number of estimated roller passes and allow the Department to verify the compaction with the same calibrated nondestructive nuclear gauge following the final roller pass. **The Department will obtain cores at 10 locations (No cores for calibration are to be taken in the surface layer, use non-destructive density results only!!)** uniformly spaced throughout the test section within the width of the single roller. Obtain GPS measurement of the core locations with a GPS rover. Use the Veda software to perform least square linear regression between the core data and IC-MV in order to correlate the production IC-MV values to the Department specified in-place air voids. A sample linear regression curve example is as follows.



C. Construction Requirements.

Use the IC roller on all lifts and types of asphalt within the limits of the project.

Ensure the optimal number of roller passes determined from the test sections has been applied to a minimum coverage of 80% of the individual IC Construction area. Ensure a minimum of 75% of the individual IC Construction area meets the target IC-MV values determined from the test sections.

Do not continue paving operations if IC Construction areas not meeting the IC criteria are produced until they have been investigated by the Department. Obtain the Engineer's approval to resume paving operations. Non-IC rollers are allowed to be used as the third roller on the project; one of the breakdown or the finish rollers is to be equipped with IC technology.

IC Construction areas are defined as subsections of the project being worked continuously by the Contractor. The magnitude of the IC Construction areas may vary with production but must be at least 750 tons per mixture for evaluation. Partial IC Construction areas of < 750 tons will be included in the previous area evaluation. IC Construction areas may extend over multiple days depending on the operations.

The IC Construction Operations Criteria does not affect the Department's acceptance processes for the materials or construction operations

5.0 MEASUREMENT. The Department will measure the total tons of asphalt mixtures compacted using the IC roller(s). Compaction is to be performed by a minimum of one (1) IC roller for a two (2) roller operation and a minimum of two (2) IC rollers when three (3) or more rollers are used for compaction. Material compacted by rollers not equipped with properly functioning IC equipment will not be accepted for payment of the bid item asphalt mixtures IC rolled. Use of

non-IC rollers can be accepted on small areas due to equipment malfunctions at the written approval of the Engineer. Paving operations should be suspended for equipment malfunctions that will extend over three days of operation.

Data is to be transferred to the cabinet in usable form no later than 30 minutes after collection. Data is to be transferred via a cloud based system.

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

- 1. Payment is full compensation for all work associated with providing IC equipped rollers, laptop computer, transmission of electronic data files, two copies of IC roller manufacturer software, and training.
- 2. Delays due to GPS satellite reception of signals to operate the IC equipment or IC roller breakdowns will not be considered justification for contract modifications or contract extensions.
- 3. Delays in data transfer will result in a reduction payment. Delays over 1 hour after collection are 75% pay, over 90 minutes are 50% pay, over 2 hours are 25% pay.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24781EC	Intelligent Compaction for Asphalt	Ton

March 14, 2019

SPECIAL NOTE FOR PAVER MOUNTED TEMPERATURE PROFILES

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

1.0 DESCRIPTION. Provide a paver mounted infrared temperature equipment to continually monitor the temperature of the asphalt mat immediately behind all paver(s) during the placement operations for all mainline pavements (including ramps for Interstates and Parkways) within the project limits. Provide thermal profiles that include material temperature and measurement locations.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02 Utilize a thermal equipment supplier that can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verification, and data management and processing as needed during the Project to maintain equipment within specifications and requirements.

Provide operator settings, user manuals, required viewing/export software for analysis. Ensure the temperature equipment will meet the following:

- A. A device with one or more infrared sensors that is capable of measuring in at least 1 foot intervals across the paving width, with a minimum width of 12 feet, or extending to the recording limits of the equipment, whichever is greater. A **Maximum of two (2)** brackets are allowed in the influence area under the sensors. A temperature profile must be made on at least 1 foot intervals longitudinally down the road:
- B. Infrared sensor(s):
 - 1. Measuring from 32°F to 400°F with an accuracy of $\pm 2.0\%$ of the sensor reading.
- C. Ability to measure the following:
 - 1. The placement distance using a Global Positioning System (GPS) or a Distance Measuring Instrument (DMI) and a Global Positioning System (GPS).
 - 2. Stationing
- D. GPS: Accuracy ± 4 feet in the X and Y Direction
- E. Latest version of software to collect, display, retain and analyze the mat temperature readings during placement. The software must have the ability to create and analyze:
 - 1. Full collected width of the thermal profiles,
 - 2. Paver speed and
 - 3. Paver stops and duration for the entire Project.
- F. Ability to export data automatically to a remote data server ("the cloud").

At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.

This web-based software must also provide the Department with the ability to download the raw files and software and to convert them into the correct format.
- G. The thermal profile data files must provide the following data in a neat easy to read table format.
 - 1. Project information including Road Name and Number, PCN, Beginning and Ending MPs.
 - 2. IR Bar Manufacturer and Model number
 - 3. Number of Temperature Sensors (N)
 - 4. Spacing between sensors and height of sensors above the asphalt mat
 - 5. Total number of individual records taken each day (DATA BLOCK)
 - a. Date and Time reading taken
 - b. Latitude and Longitude
 - c. Distance paver has moved from last test location
 - d. Direction and speed of the paver
 - e. Surface temperature of each of the sensors

3.0 CONSTRUCTION. Provide the Engineer with all required documentation at the pre-construction conference.

- A. Install and operate equipment in accordance with the manufacturer's specifications.
- B. Verify that the temperature sensors are within $\pm 2.0\%$ using an independent temperature device on a material of known temperature. Collect and compare the GPS coordinates from the equipment with an independent measuring device.
 1. Ensure the independent survey grade GPS measurement device is calibrated to the correct coordinate system (using a control point), prior to using these coordinates to validate the equipment GPS.
 2. The comparison is considered acceptable if the coordinates are within 4 feet of each other in the X and Y direction.
- C. Collect thermal profiles on all mainline pavements during the paving operation and transfer the data to the "cloud" network or if automatic data transmission is not available, transfer the data to the Engineer at the end of daily paving.
- D. Contact the Department immediately when System Failure occurs. Daily Percent Coverage will be considered zero when the repairs are not completed within two (2) working days of System Failure. The start of this two (2) working day period begins the next working day after System Failure.
- E. Evaluate thermal profile segments, every 150 feet, and summarize the segregation of temperature results. Results are to be labeled as Minimal 0° - 25° F, Moderate 25.1° - 50° F and Severe $>50^{\circ}$. Severe readings over 3 consecutive segments or over 4 or more segments in a day warrant investigation on the cause of the differential temperature distribution.

4.0 MEASUREMENT. The Department will measure the total area of the pavement lanes mapped by the infrared scanners. Full payment will be provided for all lanes with greater than 85% coverage. Partial payment will be made for all areas covered from 50% coverage to 85% coverage at the following rate Coverage area percentage X Total bid amount. And area with less than 50% coverage will not be measured for payment.

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

1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.
2. Delays due to GPS satellite reception of signals or equipment breakdowns will not be considered justification for contract modifications or contract extensions.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24891EC	Pave Mount Infrared Temp Equipment	Square Foot

March 14, 2019

Special Note for Bridge Demolition, Renovation and Asbestos Abatement

If the project includes any bridge demolition or renovation, the successful bidder is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form (DEP 7036) a minimum of 10 days prior to commencement of any bridge demolition or renovation work.

Any available information regarding possible asbestos containing materials (ACM) on or within bridges to be affected by the project has been included in the bid documents. These are to be included with the Contractor's notification filed with the KDAQ. If not included in the bid documents, the Department will provide that information to the successful bidder for inclusion in the KDAQ notice as soon as possible. If there are no documents stating otherwise, the bidders should assume there are no asbestos containing materials that will in any way affect the work.



Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

Asbestos Inspection Report

To: Ross Mills

District: Central Office

Date: April 24, 2019

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Warren 3-20019

Structure ID: 114B00054R

Structure Location: I-165 over Gasper River

Sample Description: The samples collected were negative for asbestos.

Inspection Date: April 11, 2019

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%.
No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition ([DEP7036 Form](#)) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.





(502) 495-1212
Fax: (502) 491-7111

Analysis N #	# 904234	Address:	Warren 114 B00054R
Client Name:	K Y T C		
Sampled By:	O'Dail Lawson		

[illegible]

Reviewed By: Hintono Meneaf
Signature

AJHA #1 02459

(502) 564-7250 fax (502) 564-5655



KYTC COC

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O. Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-041619-00415

O'Dail Lawson

has on 04-16-2019, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1520 Alliant Ave., Louisville, KY

Name - Training Manager

Expiration Date: 04-16-2020

Name - Instructor



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

TC 62-226
Rev. 01/2016
Page 1 of 1

RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/>	Original	<input type="checkbox"/>	Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #		COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)	
03-20019.00		Warren	1100 FD04 114 007-018	N/A	
PROJECT DESCRIPTION					
Pavement rehab on I-65 in Warren county, between mile points 7.823-18.167.					
<input checked="" type="checkbox"/>	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.					
<input type="checkbox"/>	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.					
<input type="checkbox"/>	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					
<input type="checkbox"/>	Condition # 3 (Additional Right of Way Required with Exception)				
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.					
Total Number of Parcels on Project		-0-	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION	
Number of Parcels That Have Been Acquired					
Signed Deed		-0-			
Condemnation		-0-			
Signed ROE		-0-			
Notes/ Comments (Use Additional Sheet if necessary)					
LPA RW Project Manager			Right of Way Supervisor		
Printed Name			Printed Name		Allen Arnold
Signature			Signature		Digitally signed by Allen Arnold Date: 2019.04.08 14:30:59 -05'00'
Date			Date		allen arnold
Right of Way Director			FHWA		
Printed Name		Kelly Divine	Printed Name		
Signature		2019.04.09	Signature		
Date		06:57:50 -05'00'	Date		

UTILITIES AND RAIL CERTIFICATION NOTE

COUNTY: WARREN
PROJECT ID NUMBER: FD52 114 0165 007-019
FEDERAL NUMBER: NHPP IM 0651 (102)
TYPE OF WORK: AM-PAVEMENT (PKY) (P)
ROUTE NUMBER, FACILITY NAME: I-165, BOWLING GREEN – OWENSBORO ROAD
SCOPE OF PROJECT: ADDRESS PAVEMENT CONDITION OF I-165 BOTH DIRECTION(S)
FROM MILEPOINT 7.823 TO MILEPOINT 18.167
6 YRP ITEM NUMBER: 03-20019.00

PROJECT NOTES ON UTILITIES

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

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

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.

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

UTILITIES AND RAIL CERTIFICATION NOTE

COUNTY: WARREN
PROJECT ID NUMBER: FD52 114 0165 007-019
FEDERAL NUMBER: NHPP IM 0651 (102)
TYPE OF WORK: AM-PAVEMENT (PKY) (P)
ROUTE NUMBER, FACILTY NAME: I-165, BOWLING GREEN - OWENSBORO ROAD
SCOPE OF PROJECT: ADDRESS PAVEMENT CONDITION OF I-165 BOTH DIRECTION(S)
FROM MILEPOINT 7.823 TO MILEPOINT 18.167
6 YRP ITEM NUMBER: 03-20019.00

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

Not Applicable

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

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

Not Applicable

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

Not Applicable

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ No Rail Involvement ☐ Rail Involved ☐ Rail Adjacent

Contract Id: _____ Contractor: _____

Section Engineer: _____ District & County: _____

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

***Required Signatures before Leaving Project Site**

Printed Section Engineer’s Representative_____ & Date_____

Signature Section Engineer’s Representative_____ & Date_____

Printed Contractor’s Representative_____ & Date_____

Signature Contractor’s Representative_____ & Date_____

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

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____ & Date_____

Printed Contractor’s Representative_____ & Date_____

Signature Contractor’s Representative_____ & Date_____

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

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

SUPPLEMENTAL SPECIFICATIONS

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

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

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

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

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

2.0 MATERIALS.

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

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

2.2 Sign and Controls. All signs must:

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

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

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

*Insert numerals as directed by the Engineer.

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

2.3 Power.

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

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

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

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

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

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

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

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

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

Effective June 15, 2012

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SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

1. **DESCRIPTION.** This specification covers the requirements and practices for applying an asphalt adhesive material to the longitudinal joint of the surface course of an asphalt pavement. Apply the adhesive to the face of longitudinal joint between driving lanes for the first lane paved. Then, place and compact the adjacent lane against the treated face to produce a strong, durable, waterproof longitudinal joint.
2. **MATERIALS, EQUIPMENT, AND PERSONNEL.**

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 4402
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329, Type II
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

Ensure the temperature of the pavement joint adhesive is between 380 and 410 °F when the material is extruded in a 0.125-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

2.2.1 Melter Kettle. Provide an oil-jacketed, double-boiler, melter kettle equipped with any needed agitation and recirculating systems.

2.2.2 Applicator System. Provide a pressure-feed-wand applicator system with an applicator shoe attached.

2.3 Personnel. Ensure a technical representative from the manufacturer of the pavement joint adhesive is present during the initial construction activities and available upon the request of the Engineer.

3. **CONSTRUCTION.**

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air.

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Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

3.2 Pavement Joint Adhesive Application. Ensure the ambient temperature is a minimum of 40 ° F during the application of the pavement joint adhesive. Prior to applying the adhesive, demonstrate competence in applying the adhesive according to this note to the satisfaction of the Engineer. Heat the adhesive in the melter kettle to the specified temperature range. Pump the adhesive from the melter kettle through the wand onto the vertical face of the cold joint. Apply the adhesive in a continuous band over the entire face of the longitudinal joint. Do not use excessive material in either thickness or location. Ensure the edge of the extruded adhesive material is flush with the surface of the pavement. Then, place and compact the adjacent lane against the joint face. Remove any excessive material extruded from the joint after compaction (a small line of material may remain).

3.3 Pavement Joint Adhesive Certification. Furnish the joint adhesive's certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a random sample of pavement joint adhesive from each manufacturer's lot of material. Extrude two 5 lb. samples of the heated material and forward the sample to the Division of Materials for testing. Reynolds oven bags, turkey size, placed inside small cardboard boxes or cement cylinder molds have been found suitable. Ensure the product temperature is 400°F or below at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.
5. PAYMENT. The Department will pay for the Pavement Joint Adhesive at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

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Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 ° F (Pa•s)			3.0-3.4	2.5-2.9	2.0-2.4	≤1.9
ASTM D 3236	4.0-10.0	3.5-10.5	10.6-11.0	11.1-11.5	11.6-12.0	≥ 12.1
Cone Penetration, 77 ° F			54-56	51-53	48-50	≤ 47
ASTM D 5329	60-100	57-103	104-106	107-109	110-112	≥ 113
Flow, 140 ° F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 ° F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 ° F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, ° F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9

Code
20071EC

Pay Item
Joint Adhesive

Pay Unit
Linear Foot

May 7, 2014

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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

ATTACHMENTS

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

I. GENERAL

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

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

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

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

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

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

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

II. NONDISCRIMINATION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6. Training and Promotion:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

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

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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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

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

1. Minimum wages

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

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

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

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

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

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

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

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

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

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

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

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

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

2. Withholding

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

3. Payrolls and basic records

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

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

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

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

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

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

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

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

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

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

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

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

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

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

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

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

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

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

10. Certification of eligibility.

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

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

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

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

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

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

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

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

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

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

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

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

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

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

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

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

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

VII. SAFETY: ACCIDENT PREVENTION

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

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

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

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

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. Instructions for Certification – First Tier Participants:

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

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

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

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

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

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

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

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

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

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

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

* * * * *

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

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

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

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

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

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

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

2. Instructions for Certification - Lower Tier Participants:

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

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

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

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

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

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

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

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

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

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

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

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

* * * * *

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

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

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

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

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

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

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

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

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

Revised: January 25, 2017

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.

Revised: January 27, 2017

General Decision Number: KY190040 02/15/2019 KY40

Superseded General Decision Number: KY20180102

State: Kentucky

Construction Type: Highway

Counties: Allen, Ballard, Butler, Caldwell, Calloway, Carlisle, Christian, Crittenden, Daviess, Edmonson, Fulton, Graves, Hancock, Henderson, Hickman, Hopkins, Livingston, Logan, Lyon, Marshall, McCracken, McLean, Muhlenberg, Ohio, Simpson, Todd, Trigg, Union, Warren and Webster Counties in Kentucky.

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

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/01/2019
2	02/15/2019

BRIN0004-002 06/01/2017

BALLARD, BUTLER, CALDWELL, CARLISLE, CRITTENDEN, DAVIESS, EDMONSON, FULTON, GRAVES, HANCOCK, HENDERSON, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCracken, MCLEAN, MUHLENBERG, OHIO, UNION, and WEBSTER COUNTIES

	Rates	Fringes
BRICKLAYER		
Ballard, Caldwell, Carlisle, Crittenden, Fulton, Graves, Hickman, Livingston, Lyon, Marshall, and McCracken Counties.....	\$ 30.50	15.16
Butler, Edmonson, Hopkins, Muhlenberg, and Ohio Counties.....	\$ 26.80	12.38
Daviess, Hancock, Henderson, McLean, Union, and Webster Counties.....	\$ 30.00	15.16

BRTN0004-005 06/01/2017		

ALLEN, CALLOWAY, CHRISTIAN, LOGAN, SIMPSON, TODD, TRIGG, and
WARREN COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 26.80	12.38

CARP0357-002 04/01/2016		

	Rates	Fringes
CARPENTER.....	\$ 27.70	17.03
Diver.....	\$ 41.93	17.03
PILEDRIVERMAN.....	\$ 27.95	17.03

ELEC0369-006 05/30/2018		

BUTLER, EDMONSON, LOGAN, TODD & WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 31.66	17.01

ELEC0429-001 06/01/2018		

ALLEN & SIMPSON COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 26.77	12.94

ELEC0816-002 05/28/2018		

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
FULTON (Except a 5 mile radius of City Hall in Fulton), GRAVES,
HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

	Rates	Fringes
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Page 3 of 14

similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Concrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points;& Whirley Oiler

GROUP 3 -All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling equals or exceeds 150 ft. - \$1.00 above Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10% ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0070-005 06/01/2018

BUTLER COUNTY (Eastern eighth, including the Townships of Decker, Lee & Tilford); EDMONSON COUNTY (Northern three-fourths, including the Townships of Asphalt, Bee Spring, Brownsville, Grassland, Huff, Kyrock, Lindseyville, Mammoth Cave, Ollie, Prosperity, Rhoda, Sunfish & Sweden)

	Rates	Fringes
IRONWORKER		
Structural; Ornamental;		
Reinforcing; Precast		
Concrete Erectors.....	\$ 28.79	22.50

* IRON0103-004 08/01/2018

DAVISS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, OHIO, UNION & WEBSTER COUNTIES
BUTLER COUNTY (Townships of Aberdeen, Bancock, Casey,

Dexterville, Dunbar, Elfie, Gilstrap, Huntsville, Logansport, Monford, Morgantown, Provo, Rochester, South Hill & Welchs Creek);
CALDWELL COUNTY (Northeastern third, including the Township of Creswell);
CHRISTIAN COUNTY (Northern third, including the Townships of Apex, Crofton, Kelly, Mannington & Wynns);
CRITTENDEN COUNTY (Northeastern half, including the Townships of Grove, Mattoon, Repton, Shady Grove & Tribune);
MUHLENBERG COUNTY (Townships of Bavier, Beech Creek Junction, Benton, Brennen, Browder, Central City, Cleaton, Depoy, Drakesboro, Eunis, Graham, Hillside, Luzerne, Lynn City, Martwick, McNary, Millport, Moorman, Nelson, Paradise, Powderly, South Carrollton, Tarina & Weir)

	Rates	Fringes
Ironworkers:.....	\$ 28.66	22.435

IRON0492-003 05/01/2018		

ALLEN, LOGAN, SIMPSON, TODD & WARREN COUNTIES
BUTLER COUNTY (Southern third, including the Townships of Boston, Berrys Lick, Dimple, Jetson, Quality, Sharer, Sugar Grove & Woodbury);
CHRISTIAN COUNTY (Eastern two-thirds, including the Townships of Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
EDMONSON COUNTY (Southern fourth, including the Townships of Chalybeate & Rocky Hill);
MUHLENBERG COUNTY (Southern eighth, including the Townships of Dunnior, Penrod & Rosewood)

	Rates	Fringes
Ironworkers:.....	\$ 26.11	14.02

IRON0782-006 05/01/2018		

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCracken & TRIGG COUNTIES
CALDWELL COUNTY (Southwestern two-thirds, including the Townships of Cedar Bluff, Cider, Claxton, Cobb, Crowtown, Dulaney, Farmersville, Fredonia, McGowan, Otter Pond & Princeton);
CHRISTIAN COUNTY (Western third, Excluding the Townships of Apex, Crofton, Kelly, Mannington, Wynns, Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
CRITTENDEN COUNTY (Southwestern half, including the Townships of Crayne, Dycusburg, Frances, Marion, Mexico, Midway, Sheridan & Told)

	Rates	Fringes
Ironworkers:		
Projects with a total		

contract cost of		
\$20,000,000.00 or above.....\$	28.79	24.17
All Other Work.....\$	27.20	22.75

LABO0189-005 07/01/2018

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN,
LIVINGSTON, LYON, MARSHALL & MCCracken COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....\$	23.07	14.21
GROUP 2.....\$	23.32	14.21
GROUP 3.....\$	23.37	14.21
GROUP 4.....\$	23.97	14.21

LABORER CLASSIFICATIONS

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

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

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

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

LABO0189-006 07/01/2018

ALLEN, BUTLER, CALDWELL, CHRISTIAN, DAVIESS, EDMONSON, HANCOCK,
HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, SIMPSON, TODD, TRIGG
& WARREN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 23.07	14.21
GROUP 2.....	\$ 23.32	14.21
GROUP 3.....	\$ 23.37	14.21
GROUP 4.....	\$ 23.97	14.21

LABORER CLASSIFICATIONS

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

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

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

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

LABO0561-001 07/01/2018

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES

	Rates	Fringes
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Laborers:

GROUP 1.....	\$ 22.71	15.00
GROUP 2.....	\$ 22.96	15.00
GROUP 3.....	\$ 23.01	15.00
GROUP 4.....	\$ 23.61	15.00

LABORER CLASSIFICATIONS

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

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

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

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

PAIN0032-002 09/01/2018

BALLARD COUNTY

Rates Fringes

Painters:

Bridges.....	\$ 33.56	16.13
All Other Work.....	\$ 31.86	16.13

Spray, Blast, Steam, High & Hazardous (Including Lead Abatement) and All Epoxy - \$1.00 Premium

PAIN0118-003 06/01/2014

EDMONSON COUNTY:

	Rates	Fringes
Painters:		
Brush & Roller.....	\$ 18.50	11.97
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning.....	\$ 19.50	11.97

PAIN0156-006 04/01/2015

DAVIESS, HANCOCK, HENDERSON, MCLEAN, OHIO, UNION & WEBSTER
COUNTIES

	Rates	Fringes
Painters:		
BRIDGES		
GROUP 1.....	\$ 27.60	12.85
GROUP 2.....	\$ 27.85	12.85
GROUP 3.....	\$ 28.60	12.85
GROUP 4.....	\$ 29.60	12.85
ALL OTHER WORK:		
GROUP 1.....	\$ 26.45	12.85
GROUP 2.....	\$ 26.70	12.85
GROUP 3.....	\$ 27.45	12.85
GROUP 4.....	\$ 28.45	12.85

PAINTER CLASSIFICATIONS

GROUP 1 - Brush & Roller

GROUP 2 - Plasterers

GROUP 3 - Spray; Sandblast; Power Tools; Waterblast;
Steamcleaning; Brush & Roller of Mastics, Creosotes, Kwinch
Koate & Coal Tar Epoxy

GROUP 4 - Spray of Mastics, Creosotes, Kwinch Koate & Coal
Tar Epoxy

PAIN0500-002 06/01/2018

CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON,
GRAVES, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCracken
& TRIGG COUNTIES:

	Rates	Fringes
Painters:		
Bridges.....	\$ 27.75	13.60
All Other Work.....	\$ 21.50	13.60

Waterblasting units with 3500 PSI and above - \$.50 premium
Spraypainting and all abrasive blasting - \$1.00 premium
Work 40 ft. and above ground level - \$1.00 premium

PLUM0184-002 07/01/2018

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCracken
and TRIGG COUNTIES

	Rates	Fringes
Plumber; Steamfitter.....	\$ 35.06	18.18

PLUM0502-004 08/01/2018

ALLEN, BUTLER, EDMONSON, SIMPSON & WARREN

	Rates	Fringes
Plumber; Steamfitter.....	\$ 34.62	20.78

PLUM0633-002 07/01/2017

DAVIESS, HANCOCK, HENDERSON, HOPKINS, LOGAN, MCLEAN,
MUHLENBERG, OHIO, TODD, UNION & WEBSTER COUNTIES:

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 31.47	16.80

TEAM0089-003 04/01/2018

ALLEN, BUTLER, EDMONSON, LOGAN, SIMPSON & WARREN COUNTIES

	Rates	Fringes
Truck drivers:		
Zone 1:		
Group 1.....	\$ 20.81	20.91
Group 2.....	\$ 21.00	20.91
Group 3.....	\$ 21.08	20.91
Group 4.....	\$ 21.10	20.91

GROUP 1 - Greaser; Tire Changer

GROUP 2 - Truck Mechanic; Single Axle Dump; Flat Bed; All
Terrain Vehicles when used to haul materials; Semi Trailer
or Pole Trailer when used to pull building materials and
equipment; Tandem Axle Dump; Driver of Distributors

GROUP 3 - Mixer All Types

GROUP 4 - Winch and A-Frame when used in transporting
materials; Ross Carrier; Fork Lift when used to transport
building materials; Driver on Pavement Breaker; Euclid and

Other Heavy Earth Moving Equipment; Low Boy; Articulator
Cat; Five Axle Vehicle

TEAM0215-003 04/01/2018

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO
& WEBSTER COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 22.45	20.91
Group 2.....	\$ 22.68	20.91
Group 3.....	\$ 22.75	20.91
Group 4.....	\$ 22.76	20.91
GROUP 1: Greaser, Tire Changer		
GROUP 2: Truck Mechanic		
GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors; Mixer All Types		
GROUP 4: Euclid and other heavy earth moving equipment; Low Boy; Articulator Cat; 5 Axle Vehicle; Winch and A- Frame when used in transporting materials; Ross Carrier; Fork Lift when used to transport building materials; Driver on Pavement Breaker		

TEAM0236-001 04/01/2018

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL,
MCCRACKEN,TODD & TRIGG COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 20.81	20.91
Group 2.....	\$ 21.00	20.91
Group 3.....	\$ 21.00	20.91
Group 4.....	\$ 20.10	20.91
Group 5.....	\$ 21.08	20.91
GROUP 1: Greaser, Tire Changer		
GROUP 2: Truck Mechanic		
GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Drivers of Distributors		
GROUP 4: Euclid and other heavy earth moving equipment; Low		

Boy; Articulator Cat; Five Axle Vehicle; Winch and A-Frame
when used in transporting materials; Ross Carrier

GROUP 5: Mixer All Types

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

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

the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

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

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

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

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

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

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

OVERTIME:

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

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

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

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

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
12.0%	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 Warren County.

PART IV

INSURANCE

INSURANCE

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

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

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

PART V

BID ITEMS

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	2,163.00	TON		\$	
0020	00100		ASPHALT SEAL AGGREGATE	486.00	TON		\$	
0030	00103		ASPHALT SEAL COAT	59.00	TON		\$	
0040	00194		LEVELING & WEDGING PG76-22	500.00	TON		\$	
0050	00216		CL3 ASPH BASE 1.00D PG76-22	1,247.00	TON		\$	
0060	00336		CL3 ASPH SURF 0.38A PG76-22	32,012.00	TON		\$	
0070	02677		ASPHALT PAVE MILLING & TEXTURING	33,259.00	TON		\$	
0080	20071EC		JOINT ADHESIVE	218,466.00	LF		\$	
0090	24878EC		ASPHALT EMULSION FOR FOG SEAL	95.00	TON		\$	
0100	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	102.00	TON		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0110	01984		DELINEATOR FOR BARRIER - WHITE	24.00	EACH		\$	
0120	01985		DELINEATOR FOR BARRIER - YELLOW	24.00	EACH		\$	
0130	02003		RELOCATE TEMP CONC BARRIER	1,120.00	LF		\$	
0140	02014		BARRICADE-TYPE III	8.00	EACH		\$	
0150	02159		TEMP DITCH	5,280.00	LF		\$	
0160	02160		CLEAN TEMP DITCH	2,640.00	LF		\$	
0170	02262		FENCE-WOVEN WIRE TYPE 1	100.00	LF		\$	
0180	02265		REMOVE FENCE	100.00	LF		\$	
0190	02351		GUARDRAIL-STEEL W BEAM-S FACE	1,300.00	LF		\$	
0200	02381		REMOVE GUARDRAIL	1,925.00	LF		\$	
0210	02562		TEMPORARY SIGNS	800.00	SQFT		\$	
0220	02575		DITCHING AND SHOULDERING	54,617.00	LF		\$	
0230	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0240	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0250	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0260	02696		SHOULDER RUMBLE STRIPS	218,466.00	LF		\$	
0270	02701		TEMP SILT FENCE	5,280.00	LF		\$	
0280	02703		SILT TRAP TYPE A	3.00	EACH		\$	
0290	02704		SILT TRAP TYPE B	3.00	EACH		\$	
0300	02705		SILT TRAP TYPE C	3.00	EACH		\$	
0310	02706		CLEAN SILT TRAP TYPE A	3.00	EACH		\$	
0320	02707		CLEAN SILT TRAP TYPE B	3.00	EACH		\$	
0330	02708		CLEAN SILT TRAP TYPE C	3.00	EACH		\$	
0340	02726		STAKING	1.00	LS		\$	
0350	02775		ARROW PANEL	2.00	EACH		\$	
0360	02898		RELOCATE CRASH CUSHION	2.00	EACH		\$	
0370	03171		CONCRETE BARRIER WALL TYPE 9T	1,120.00	LF		\$	
0380	05950		EROSION CONTROL BLANKET	14,520.00	SQYD		\$	
0390	05952		TEMP MULCH	9,680.00	SQYD		\$	
0400	05953		TEMP SEEDING AND PROTECTION	7,260.00	SQYD		\$	
0410	05963		INITIAL FERTILIZER	1.50	TON		\$	

Report Date 5/1/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0420	05964		MAINTENANCE FERTILIZER	.80	TON		\$	
0430	05989		SPECIAL SEEDING CROWN VETCH	1,742.00	SQYD		\$	
0440	05992		AGRICULTURAL LIMESTONE	9.00	TON		\$	
0450	06401		FLEXIBLE DELINEATOR POST-M/W	989.00	EACH		\$	
0460	06511		PAVE STRIPING-TEMP PAINT-6 IN	470,239.00	LF		\$	
0470	06542		PAVE STRIPING-THERMO-6 IN W	68,270.00	LF		\$	
0480	06543		PAVE STRIPING-THERMO-6 IN Y	54,617.00	LF		\$	
0490	06549		PAVE STRIPING-TEMP REM TAPE-B	2,775.00	LF		\$	
0500	06550		PAVE STRIPING-TEMP REM TAPE-W	5,100.00	LF		\$	
0510	06551		PAVE STRIPING-TEMP REM TAPE-Y	1,500.00	LF		\$	
0520	06556		PAVE STRIPING-DUR TY 1-6 IN W	650.00	LF		\$	
0530	06557		PAVE STRIPING-DUR TY 1-6 IN Y	520.00	LF		\$	
0540	06585		PAVEMENT MARKER TY IVA-MW TEMP	300.00	EACH		\$	
0550	08903		CRASH CUSHION TY VI CLASS BT TL3	2.00	EACH		\$	
0560	10020NS		FUEL ADJUSTMENT	52,548.00	DOLL	\$1.00	\$	\$52,548.00
0570	10030NS		ASPHALT ADJUSTMENT	131,984.00	DOLL	\$1.00	\$	\$131,984.00
0580	24489EC		INLAID PAVEMENT MARKER	1,366.00	EACH		\$	
0590	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	33,759.00	TON		\$	
0600	24891EC		PAVE MOUNT INFRARED TEMP EQUIPMENT	2,621,583.00	SF		\$	
0610	24986EC		HMA ELECTRONIC DELIVERY MGMT SYSTEM	1.00	L S		\$	
0620	25008EC		PAVE STRIPING-THERMO-6 IN W-WET REFLECT	68,270.00	LF		\$	
0630	25009EC		PAVE STRIPING-THERMO-6 IN Y-WET REFLECT	54,617.00	LF		\$	
0640	25019EC		GROOVE FOR PAVE STRIPING - 7 IN	122,887.00	LF		\$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0650	00078		CRUSHED AGGREGATE SIZE NO 2	555.00	TON		\$	
0660	00461		CULVERT PIPE-15 IN	32.00	LF		\$	
0670	00462		CULVERT PIPE-18 IN	4.00	LF		\$	
0680	00466		CULVERT PIPE-30 IN	22.00	LF		\$	
0690	00472		CULVERT PIPE-60 IN	21.00	LF		\$	
0700	01210		PIPE CULVERT HEADWALL-30 IN	1.00	EACH		\$	
0710	01220		PIPE CULVERT HEADWALL-60 IN	1.00	EACH		\$	
0720	01310		REMOVE PIPE	102.00	LF		\$	
0730	01443		SLOPED AND PARALLEL HEADWALL-15 IN	8.00	EACH		\$	
0740	01450		S & F BOX INLET-OUTLET-18 IN	1.00	EACH		\$	
0750	01452		S & F BOX INLET-OUTLET-30 IN	2.00	EACH		\$	
0760	01646		JUNCTION BOX-42 IN	2.00	EACH		\$	
0770	01691		FLUME INLET TYPE 2	3.00	EACH		\$	
0780	02165		REMOVE PAVED DITCH	1,475.00	SQYD		\$	
0790	02469		CLEAN SINKHOLE	2.00	EACH		\$	
0800	02484		CHANNEL LINING CLASS III	2,204.00	TON		\$	
0810	02599		FABRIC-GEOTEXTILE TYPE IV	20.00	SQYD		\$	
0820	02625		REMOVE HEADWALL	8.00	EACH		\$	
0830	22883EN		CONCRETE WEDGE CURB	594.00	LF		\$	

Report Date 5/1/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0840	24252EC		JUNCTION BOX-66 IN	1.00	EACH		\$	

Section: 0004 - BRIDGE - GASPER RIVER (114B00054L)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0850	02110		PARTIAL DEPTH PATCHING	515.00	CUFT		\$	
0860	03299		ARMORED EDGE FOR CONCRETE	120.00	LF		\$	
0870	08504		EPOXY SAND SLURRY	214.00	SQYD		\$	
0880	08526		CONC CLASS M FULL DEPTH PATCH	18.00	CUYD		\$	
0890	08534		CONCRETE OVERLAY-LATEX	72.00	CUYD		\$	
0900	08549		BLAST CLEANING	1,988.00	SQYD		\$	
0910	08551		MACHINE PREP OF SLAB	1,725.00	SQYD		\$	
0920	20599EC		CONCRETE BEAM REPAIR	16.00	SQFT		\$	

Section: 0005 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0930	02568		MOBILIZATION	1.00	LS		\$	
0940	02569		DEMOBILIZATION	1.00	LS		\$	