CALL NO. 404

CONTRACT ID. 212152

WEBSTER COUNTY

FED/STATE PROJECT NUMBER 117GR21P030 - FD05 & FD04

DESCRIPTION CLAY - DIXON (KY 132)

WORK TYPE ASPHALT RESURFACING

PRIMARY COMPLETION DATE 11/15/2021

LETTING DATE: April 23,2021

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 am EASTERN DAYLIGHT TIME April 23,2021. Bids will be publicly announced at 10:00 am EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DEFERRED PAYMENT

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 02

CONTRACT ID - 212152

117GR21P030 - FD05 & FD04

COUNTY - WEBSTER

PCN - MP11701322101
FD05 117 0132 008-016

CLAY - DIXON (KY 132) (MP 8.778) BEGINNING 0.061 MILES WEST OF KY 270 EXTENDING EAST TO A POINT 1.771 MILES EAST OF NAT TAYLOR ROAD. (MP 15.273), A DISTANCE OF 06.49 MILES.ASPHALT RESURFACING

GEOGRAPHIC COORDINATES LATITUDE 37:42:45.00 LONGITUDE 87:54:56.00

PCN - MP11701322102
FD04 117 0132 008-016

CLAY - DIXON (KY 132) (MP 8.778) BEGINNING 0.061 MILES WEST OF KY 270 EXTENDING EAST TO A POINT 1.771 MILES EAST OF NAT TAYLOR ROAD. (MP 15.273), A DISTANCE OF 06.49 MILES.BRIDGE WITH GRADE, DRAIN & SURFACE SYP NO. 02-10019.00.

GEOGRAPHIC COORDINATES LATITUDE 37:42:45.00 LONGITUDE 87:54:56.00

COMPLETION DATE(S):

COMPLETED BY 11/15/2021 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

Bidder must use the Department's 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.

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

RECIPROCAL PREFERENCE TO BE GIVEN BY PUBLIC AGENCIES TO RESIDENT BIDDERS

By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the electronic bidding software. Submittal of the Affidavit should be done along the bid in Bid Express.

April 30, 2018

DEFERRED PAYMENT

The successful bidder on this project may request a work order with an effective date prior to June 15, 2021. The successful bidder must make the request in writing to the Department. The Department will issue a work order at the request of the contractor with the distinct understanding that payment for any Work Performed Estimates may be delayed until July 15, 2021. Unless the successful bidder requests an earlier work order date, the Department will issue a work order on June 15, 2021 for this project.

SURFACING AREAS

The Department estimates the mainline surfacing width to be varied 22 to 25 feet.
The Department estimates the total mainline area to be surfaced to be 97,077 square yards.
The Department estimates the DGA shoulder width to be 1 foot on each side.
The Department estimates the total shoulder area to receive DGA to be 7,621 square yards.

ASPHALT MIXTURE

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

DGA BASE 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.

OPTION B

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

SPECIAL NOTE FOR NON-TRACKING TACK COAT

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

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

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

2.1.1 Provide a tack conforming to the following material requirements:

Property	Specification	Test Procedure
Viscosity, SFS, 77 ˚ F	20 – 100	AASHTO T 72
Sieve, %	0.3 max.	AASHTO T 59
Asphalt Residue[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 - 18 103 - 105	15 - 16 106 - 107	14 108 - 109	≤13 ≥ 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, º 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	Pay Item	Pay Unit
24970EC	Asphalt Material for Tack Non-Tracking	Ton

SPECIAL NOTE FOR EXPERIMENTAL KYCT AND HAMBURG TESTING

1.0 General

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

2.0 Equipment

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

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

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

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

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

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

3.0 Testing Requirements

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

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

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

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

3.2.3 Record Times. For each sublot, record the time required between drying aggregates in the plant to KYCT specimen fabrication. The production time may vary due to the time that the bituminous material is held in the silo. Record the preconditioning time when the time exceeds the one hour specimen cool down time as required in accordance to The Kentucky Method for KYCT Index Testing. The preconditioning time may exceed an hour if the technician is unable to complete the test on the

same day or within the specified times as outlined in The Kentucky Method for KYCT Index Testing. The production time and the preconditioning time shall be recorded on the AMAW.

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

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

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

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

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

4.0 Data

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

5.0 KYCT Video Demonstration

https://youtu.be/84j0bM45-hg

6.0 Payment

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

SPECIAL NOTE FOR AWARD OF CONTRACT

Contrary to Section 103.02, the Department may hold the Bid Proposals of any or all bidders for a period not to exceed 90 calendar days for final disposition of award. The Department may hold the Bid Proposal of the lowest bidder longer than 90 calendar days if the bidder concurs.

Contrary to Section 103.04, The Department will hold the Proposal Guaranty of the lowest bidder and the Proposal Guaranty of the second lowest bidder, as determined by the Commissioner, until the Department awards the Contract and executes and approves the Contract and bond of the successful bidder, or until the Department rejects all Bid Proposals. If the Department does not make an award within 90 calendar days, the Department will return all Proposal Guaranties.

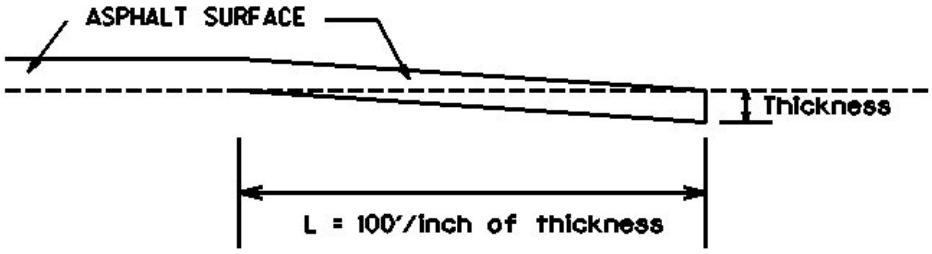
Except as provided in this note or elsewhere in the proposal, the Department will apply all other applicable portions of Section 103.

1-3002 Award of Contract
01/02/2012

SPECIAL NOTE FOR EDGE KEY

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

EDGE KEY



Thickness = 1 Inch

L = 100 LF

L= Length of Edge Key

1-3309 Edge key by Ton
01/02//2012

SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING

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

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

1-3505 2 weeks Contractor keeps millings
01/2/2012

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

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

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the Standard and Supplemental Specifications and the Standard and Sepia 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".

Contrary to Section 106.01, furnish new, or used in like new condition, traffic control devices at the beginning of the work and maintain in like new condition until completion of the work.

PROJECT PHASING & CONSTRUCTION PROCEDURES

The Engineer may specify days and hours when lane closures will not be allowed.

Maintain alternating one way traffic during construction. Provide a minimum clear lane width of 10 feet; however, provide for passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus on an official run arrives on the scene, make provisions for the passage of the bus as quickly as possible.

LANE CLOSURES

Do not leave lane closures in place during non-working hours.

SIGNS

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

CHANGEABLE MESSAGE SIGNS

If deemed necessary by the Engineer, the Department will furnish, operate, and maintain Changeable Message Signs.

TEMPORARY ENTRANCES

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

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

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

BARRICADES

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

The Department will measure barricades used to protect pavement removal areas in individual units Each. The Department will measure for payment the maximum number of barricades in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual barricades only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged barricades the Engineer directs to be replaced due to poor condition or reflectivity. Retain possession of the Barricades upon completion of construction.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of the final surface course.

Install Temporary Striping according to Section 112 with the following exception:

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

PAVEMENT EDGE DROP-OFFS

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

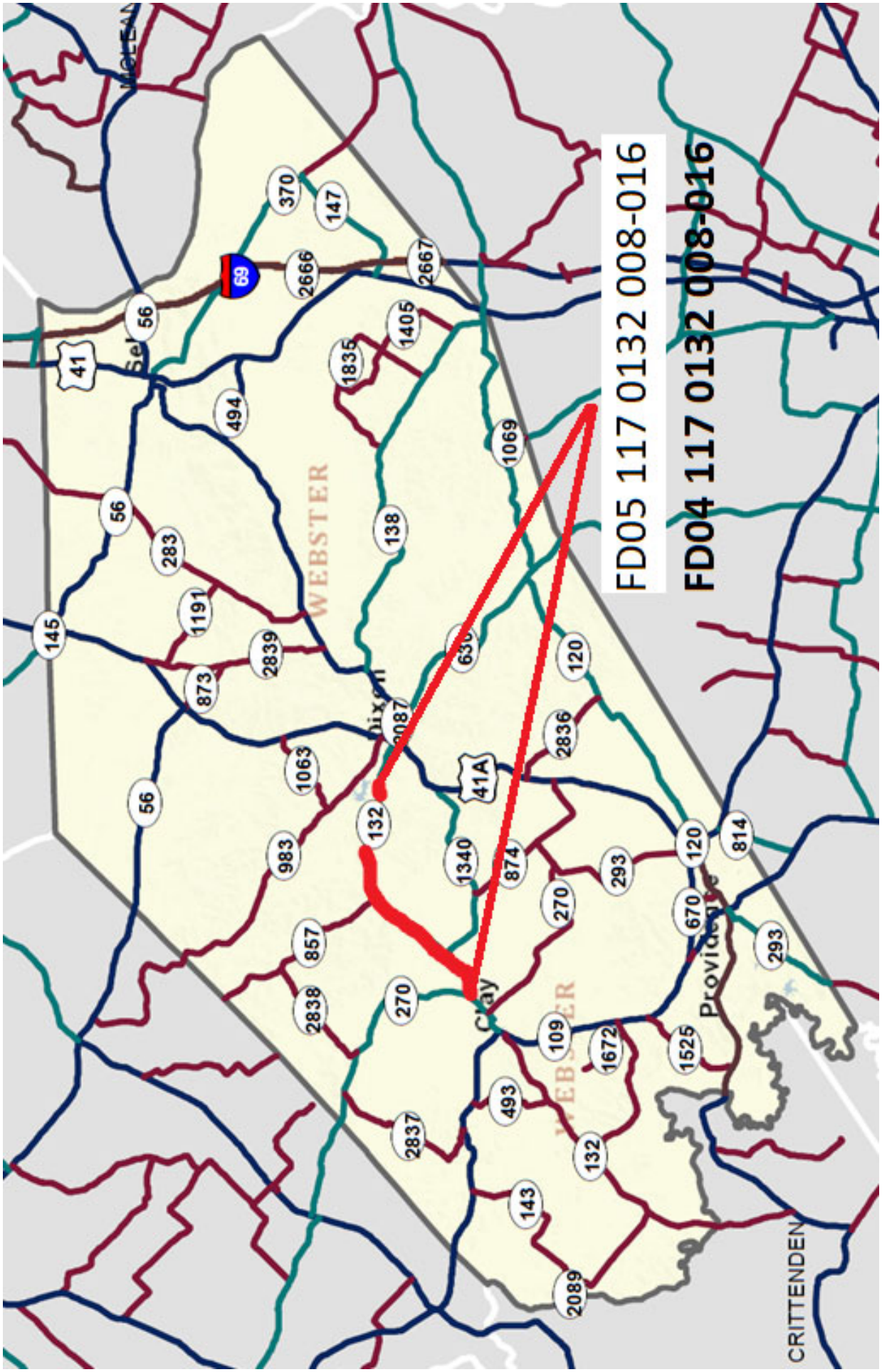
Protect pavement edges that traffic is not expected to cross, except accidentally, as follows:

Less than 2" - No protection required.

2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

Greater than 4" - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4". Place Type III Barricades directly in front of the drop-off facing on coming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer

Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the engineer.


FD05 117 0132 008-016
FD04 117 0132 008-016
WEBSTER
Dixon
Clay
Providence
CRITTENDEN
69
41
41A
56
370
147
2666
2667
1405
1835
494
1069
138
283
1191
145
2839
873
1063
983
132
2087
120
2836
1340
874
293
270
670
814
857
2838
109
1672
1525
493
2837
143
2089

MATERIAL SUMMARY

CONTRACT ID: 212152 **117GR21P030 - FD05 & FD04** **MP11701322101**

CLAY - DIXON (KY 132) BEGINNING 0.061 MILES WEST OF KY 270 EXTENDING EAST TO A POINT 1.771 MILES EAST OF NAT TAYLOR ROAD. ASPHALT RESURFACING, A DISTANCE OF 6.49 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	1,300.00	TON
0010	00190	LEVELING & WEDGING PG64-22	735.00	TON
0015	00301	CL2 ASPH SURF 0.38D PG64-22	5,340.00	TON
0020	02562	TEMPORARY SIGNS	330.00	SQFT
0025	02650	MAINTAIN & CONTROL TRAFFIC - (FD05)	1.00	LS
0030	02676	MOBILIZATION FOR MILL & TEXT - (FD05)	1.00	LS
0035	02677	ASPHALT PAVE MILLING & TEXTURING	75.00	TON
0040	02697	EDGELINE RUMBLE STRIPS	68,600.00	LF
0045	06510	PAVE STRIPING-TEMP PAINT-4 IN	35,000.00	LF
0050	06515	PAVE STRIPING-PERM PAINT-6 IN	60,000.00	LF
0055	10020NS	FUEL ADJUSTMENT	9,456.00	DOLL
0060	10030NS	ASPHALT ADJUSTMENT	23,751.00	DOLL
0065	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	34.00	TON
0070	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY

CONTRACT ID: 212152 **117GR21P030 - FD05 & FD04** **MP11701322102**

CLAY - DIXON (KY 132) BEGINNING 0.061 MILES WEST OF KY 270 EXTENDING EAST TO A POINT 1.771 MILES EAST OF NAT TAYLOR ROAD. BRIDGE WITH GRADE, DRAIN & SURFACE, A DISTANCE OF 6.49 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0075	00003	CRUSHED STONE BASE	375.00	TON
0080	00103	ASPHALT SEAL COAT	23.00	TON
0085	00190	LEVELING & WEDGING PG64-22	1,326.00	TON
0090	00212	CL2 ASPH BASE 1.00D PG64-22	844.00	TON
0095	00291	EMULSIFIED ASPHALT RS-2	3.00	TON
0100	00301	CL2 ASPH SURF 0.38D PG64-22	227.00	TON
0105	02676	MOBILIZATION FOR MILL & TEXT - (FD04)	1.00	LS
0110	02677	ASPHALT PAVE MILLING & TEXTURING	229.00	TON
0115	21289ED	LONGITUDINAL EDGE KEY	1,204.00	LF
0120	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	2.00	TON
0125	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	12.00	EACH
0130	02014	BARRICADE-TYPE III	4.00	EACH
0135	02230	EMBANKMENT IN PLACE	2,258.00	CUYD
0140	02351	GUARDRAIL-STEEL W BEAM-S FACE	230.00	LF
0145	02355	GUARDRAIL-STEEL W BEAM-S FACE A	100.00	LF
0150	02367	GUARDRAIL END TREATMENT TYPE 1	4.00	EACH
0155	02562	TEMPORARY SIGNS	500.00	SQFT
0160	02585	EDGE KEY	59.00	LF
0165	02650	MAINTAIN & CONTROL TRAFFIC - (FD04)	1.00	LS
0170	02726	STAKING	1.00	LS
0175	08801	GUARDRAIL-STEEL W BEAM-S FACE BR	92.00	LF
0180	20205EC	PAVE MARK STOP BAR-24 IN PAINT	20.00	LF
0185	02701	TEMP SILT FENCE	625.00	LF
0190	02703	SILT TRAP TYPE A	1.00	EACH
0195	02704	SILT TRAP TYPE B	1.00	EACH
0200	02706	CLEAN SILT TRAP TYPE A	3.00	EACH
0205	02707	CLEAN SILT TRAP TYPE B	3.00	EACH
0210	05950	EROSION CONTROL BLANKET	270.00	SQYD
0215	05952	TEMP MULCH	2,300.00	SQYD
0220	05985	SEEDING AND PROTECTION	1,325.00	SQYD
0225	02731	REMOVE STRUCTURE	1.00	LS
0230	23820EC	PRECAST ARCH	1.00	LS
0235	24844EC	UTILITY RELOCATION	1.00	DOLL
0240	02569	DEMOBILIZATION	1.00	LS

Milling
Summary
FD05 117 0132 008-016

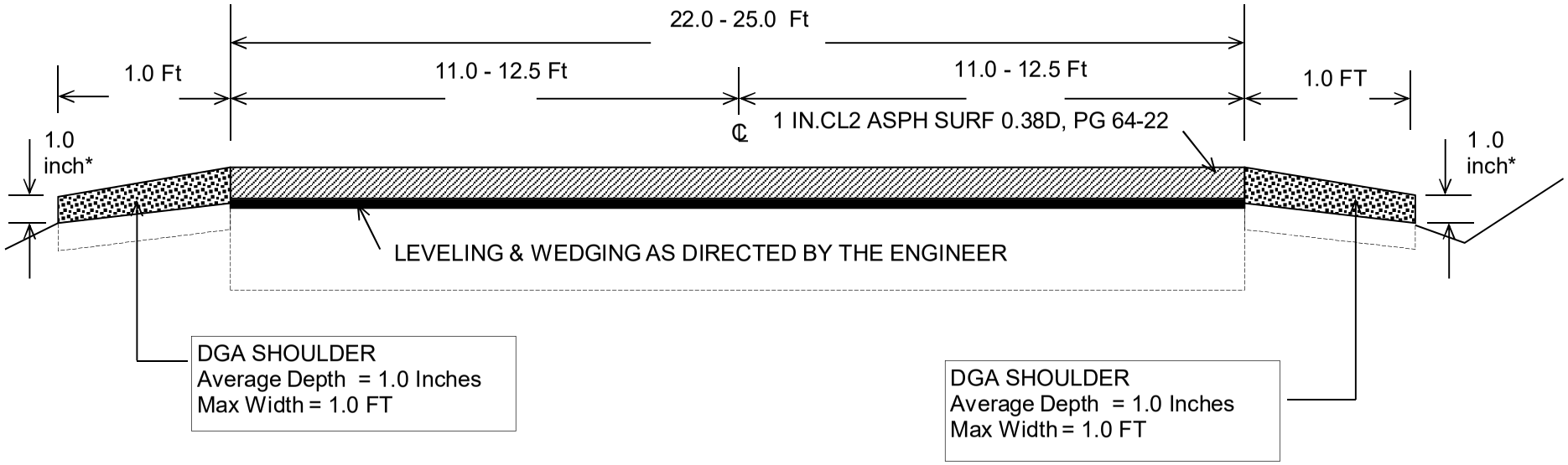
				Total	75
Milepoint	**Comment**	**Length**	**Width**	**Avg Depth**	**Tons**
8.778	Edge Key	100	24	0.5	7.333
					0.000
8.839	edge key @ 270	250	8	0.5	6.111
					0.000
10.101	edge key @ 1340	50	24	0.5	3.667
11.224	Bridge Ends	200	24	0.5	14.667
12.379	edge key @ 857	50	24	0.5	3.667
12.630	Bridge Ends	200	24	0.5	14.667
14.169	Bridge Ends	200	24	0.5	14.667
15.273	Edge Key	100	24	0.5	7.333
					0.000
					0.000
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0

TYPICAL SECTION

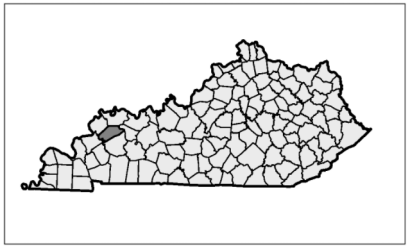
WEBSTER COUNTY

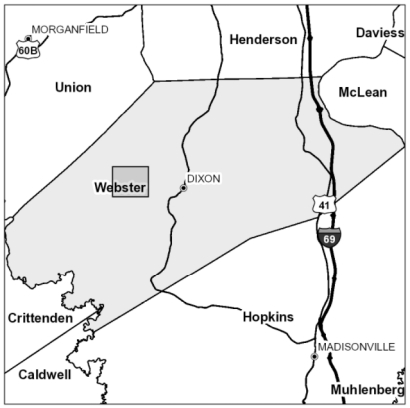
FD05 117 0132 008-016

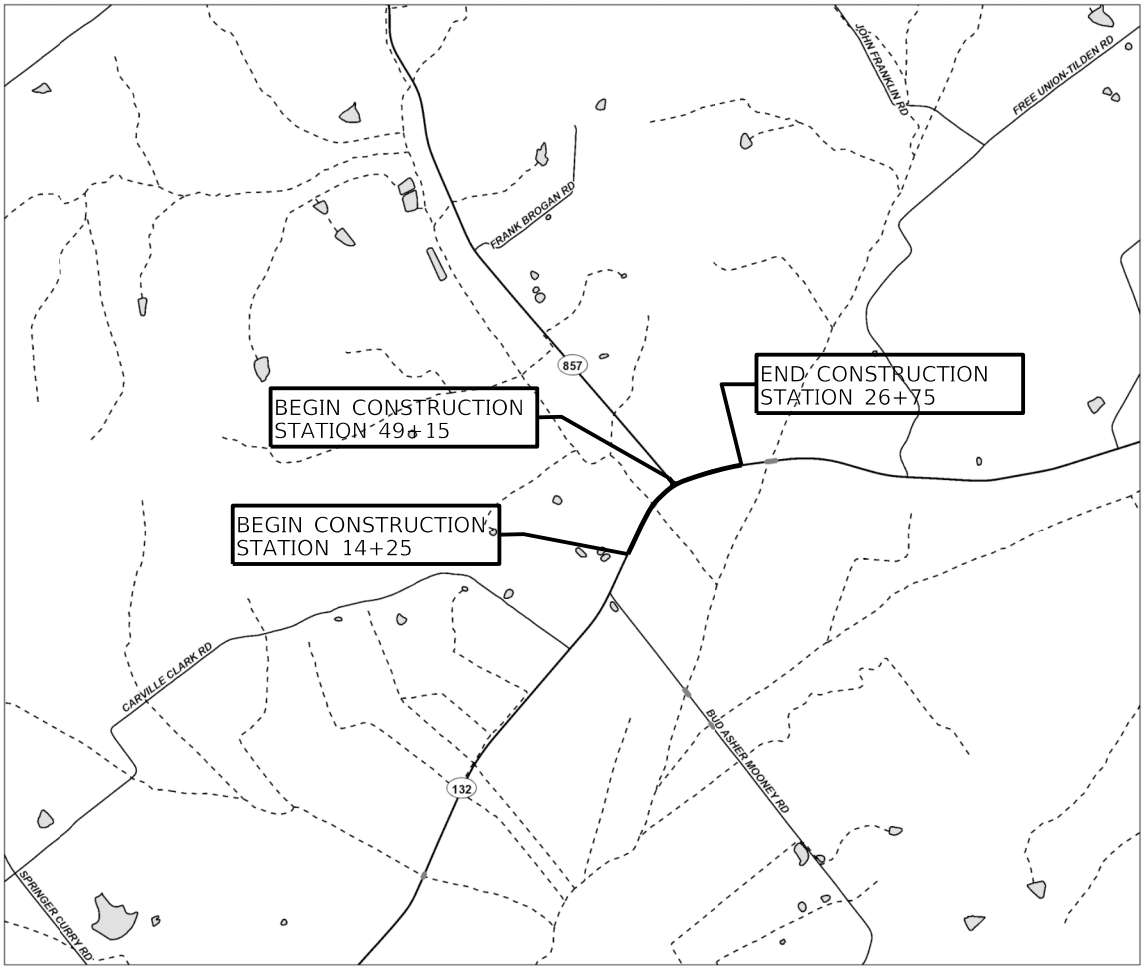
MP 8.778 - 15.273

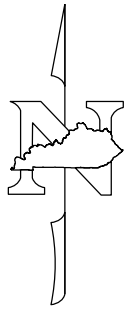


*** Where Existing Site Conditions Permit**









INDEX OF SHEETS

SHEET NO.	DESCRIPTION
R1	LAYOUT SHEET
R2	TYPICAL SECTIONS
R2A	SUMMARY OF QUANTITIES
R3-R9	PLAN AND PROFILE SHEETS
R10	COORDINATE CONTROL SHEETS
R11-R25	DETAIL SHEETS
S1-S12	STRUCTURE & GEOTECH PLANS
X1-X31	CROSS SECTION SHEETS

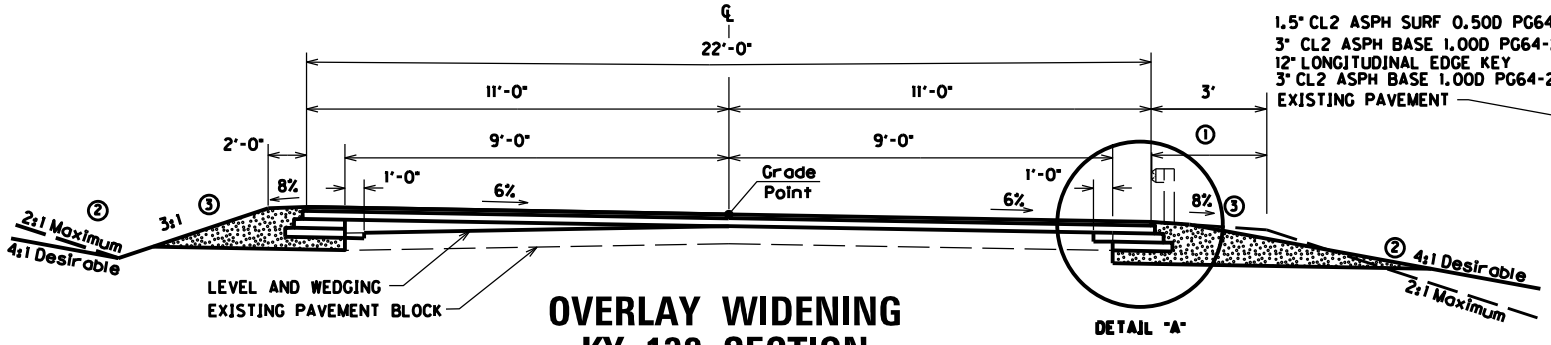
SCALE: 1"=2500'

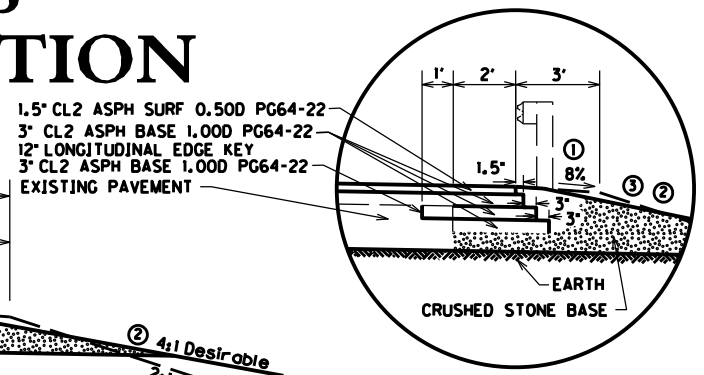
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R1

PROPOSAL PROJECT
Webster County

KY 132 Curve Correction

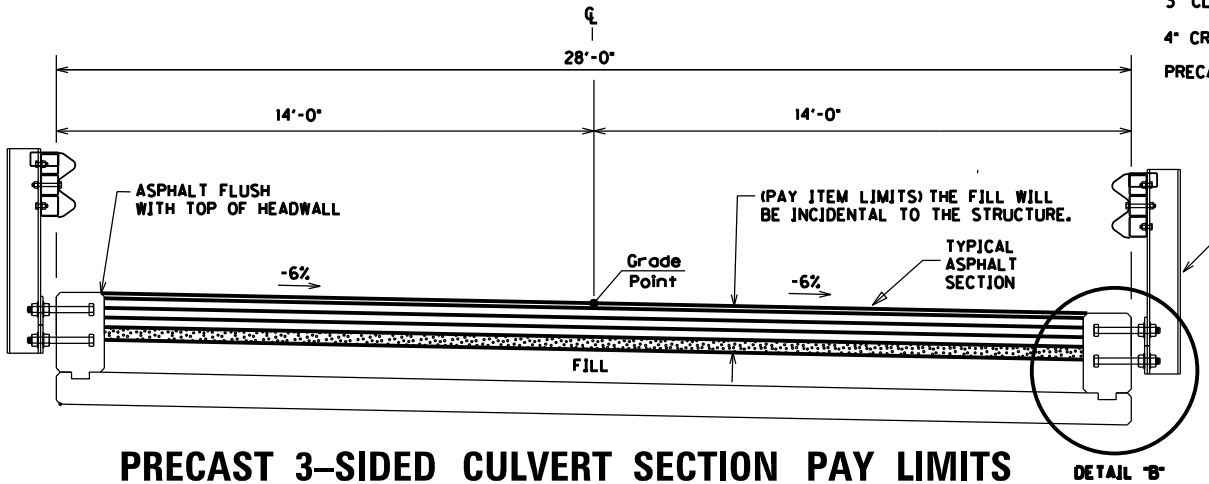
TYPICAL SECTIONS
KY 132 CURVE CORRECTION

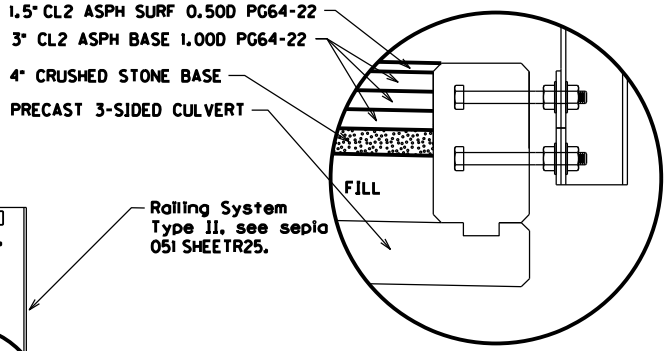




DETAIL "A"

OVERLAY WIDENING
KY 132 SECTION
STA. 14+25 TO STA. 16+82, STA. 17+82 TO STA. 26+75





DETAIL "B"

PRECAST 3–SIDED CULVERT SECTION PAY LIMITS
KY 132 STA. 16+82 TO STA. 17+82
CULVERT LENGTH 46'

EDGE KEY DETAIL

THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR "EDGE KEY" INCLUDES ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT TO PERFORM THE WORK AND DISPOSE OF THE REMOVED ASPHALT MATERIAL.

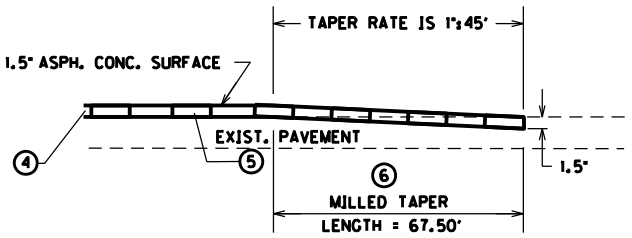
NEW CONSTRUCTION: GRADE, DRAIN AND FLEXIBLE PAVEMENT
- USING -

PAVEMENT

APPROX. 13" BASE — 4" CRUSHED STONE BASE
9" COMPACTED DEPTH CL2 ASPH BASE 1.00D PG64-22 (3- 3" COURSES)

APPROX. 1.5" SURFACE — 1.5" COMPACTED DEPTH CL2 ASPH SURF 0.50D PG64-22

① WIDEN SHOULDER 3' WHERE GUARDRAIL IS REQUIRED.
② FOR SLOPES OUTSIDE OF SHOULDERS - SEE X-SECT
③ ASPHALT SEAL COAT REQUIRED FROM EDGE OF PAVED SHOULDER TO 2 FT. DOWN THE DITCH OF FILL SLOPE.
2.4 LB. PER S.Y. OF ASPHALT SEAL COAT (TWO APPLICATIONS)
20 LB. PER S.Y. OF ASPHALT SEAL AGGREGATE (SIZE NO. 8 OR 9M) (TWO APPLICATIONS)



④ MINIMUM COMPACTED THICKNESS
⑤ ASPHALT MIXTURE FOR LEVELING AND WEDGING OR NEXT COURSE OF ASPHALT MIXTURE.
⑥ MILL EXISTING PAVEMENT TO RECEIVE ASPHALT SURFACE FULL DEPTH (EDGE KEY).

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R2

KY 132 CURVE CORRECTION

TYPICAL SECTION

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	KY 132	KY 857	TOTAL
00190	LEVEL AND WEDGING (PAVER MUST BE USED FOR PLACEMENT)	TON	1117	209	**1326**
01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	EA	12		**12**
02014	BARRICADE-TYPE III	EACH	4		**4**
02230	EMBANKMENT IN PLACE (INCLUDES 1620 FOR EMB BENCHING)	CUYD	2239	19	**2258**
02351	GUARDRAIL-STEEL W BEAM-S FACE	LF	230		**230**
02355	GUARDRAIL-STEEL W BEAM-S FACE A	LF	100		**100**
02367	GUARDRAIL END TREATMENT TYPE 1	EA	4		**4**
02562	TEMPORARY SIGNS	SQFT	500		**500**
02569	DEMOBILIZATION	LS			**1**
02585	EDGE KEY	LF	41	18	**59**
02650	MAINTAIN & CONTROL TRAFFIC	LS			**1**
02676	MOBILIZATION FOR MILL & TEXT	LS			**1**
02677	ASPHALT PAVE MILLING & TEXTURING	TON	227	2	**229**
02701	TEMP SILT FENCE	LF	625		**625**
02703	SILT TRAP TYPE A	EACH	1		**1**
02704	SILT TRAP TYPE B	EACH	1		**1**
02706	CLEAN SILT TRAP TYPE A	EACH	3		**3**
02707	CLEAN SILT TRAP TYPE B	EACH	3		**3**
02726	STAKING	LS	1		**1**
02731	REMOVE STRUCTURE	EACH	1		**1**
05950	EROSION CONTROL BLANKET	SQYD	270		**270**
05952	TEMP MULCH	SQYD	2300		**2300**
05985	SEEDING AND PROTECTION	SQYD	1325		**1325**
06510	PAVE STRIPING-TEMP PAINT-4 IN YELLOW	LF	2500	120	**2620**
06514	PAVE STRIPING-PERM PAINT-4 IN YELLOW	LF	2500	120	**2620**
08033	TEST PILES (1-VERTICAL)	LF	25		**25**
08046	PILES-STEEL HP12X53 (9-VERTICAL, 14-BATTERED 4:1)	LF	488		**488**
08801	GUARDRAIL-STEEL W BEAM-S FACE BR	LF	92		**92**
20205EC	PAVE MARK STOP BAR-24 IN PAINT	LF		20	**20**
23820EC	PRECAST ARCH	LS	1		**1**
24605ED	UTILITY RELOCATION ONE POLE	EACH	1		**1**
24970EC	TRACKLESS TACK	TON	1.5		**1.5**
08003	FOUNDATION PREPARATION	LS	1		**1**
21289ED	LONGITUDINAL EDGE KEY	LF	1204		**1204**

Notes:

*The project completion date will be November 15, 2021 with an intermediate roadway closure period of 30 Calendar days. The contractor can decide when these days occur, provlded they do not begln before June 1st and are nlshed by August 1st. Addltlonal Liquidated Damages of $2000/day will be assessed in addition to the original contracts Liquidated Damages for fallure to re-open the road wlthln the allowable tlme frame. The contractor wlll be allowed to re-open the roadway wlthout the nal surface belng completed. A bld Item for temporary strlplng wlll be lncluded In the bld Items for thls contingency.

**For the procurement requirements of the structure, developed notes state that there is a piling layout completed and the bidder must utilize this piling layout for his design. In addition, piling layout changes will not be considered for Value Engineering.

PAVING SUMMARY

ITEM CODE	ITEM	UNIT	KY 132	KY 857	TOTAL PROJECT
00309	1.5" CL2 ASPH SURF 0.50D PG64-22 (OUTSIDE BRIDGE LIMITS)	TON	208	19	**227**
00309	1.5" CL2 ASPH SURF 0.50D PG64-22 (INSIDE BRIDGE LIMITS)	TON	22		**22**
00212	3" CL2 ASPH BASE 1.00D PG64-22 (OUTSIDE BRIDGE LIMITS)	TON	598	114	712
00212	3" CL2 ASPH BASE 1.00D PG64-22 (INSIDE BRIDGE LIMITS)	TON	132		132
00003	CRUSHED STONE BASE (OUTSIDE BRIDGE LIMITS) INCLUDES 60 TONS FOR ENTRANCES	TON	246	8	314
00003	CRUSHED STONE BASE (INSIDE BRIDGE LIMITS)	TON	61		61
00103	ASPHALT SEAL COAT (OUTSIDE BRIDGE LIMITS)	TON	20	2	22
00103	ASPHALT SEAL COAT (INSIDE BRIDGE LIMITS)	TON	1		1
00291	EMULSIFIED ASPHALT RS-2 (OUTSIDE BRIDGE LIMITS)	TON	2.45	0.21	3
00291	EMULSIFIED ASPHALT RS-2 (INSIDE BRIDGE LIMITS)	TON	0.11		0.11

ITEM		KY 132	KY 857	TOTALS
		SQUARE YARDS		
00309	1.5" CL2 ASPH SURF 0.50D PG64-22 (OUTSIDE BRIDGE LIMITS)	2518	228	**2746**
00309	1.5" CL2 ASPH SURF 0.50D PG64-22 (INSIDE BRIDGE LIMITS)	267		**267**
00212	3" CL2 ASPH BASE 1.00D PG64-22 (OUTSIDE BRIDGE LIMITS)	3638	2131	**5769**
00212	3" CL2 ASPH BASE 1.00D PG64-22 (INSIDE BRIDGE LIMITS)	267		**267**
00003	CRUSHED STONE BASE (OUTSIDE BRIDGE LIMITS)	535	16	**551**
00003	CRUSHED STONE BASE (INSIDE BRIDGE LIMITS)	267		**267**
00103	ASPHALT SEAL COAT (OUTSIDE BRIDGE LIMITS)	1022	86	**1108**
00103	ASPHALT SEAL COAT (INSIDE BRIDGE LIMITS)	44		**44**
00291	EMULSIFIED ASPHALT RS-2 (OUTSIDE BRIDGE LIMITS)	1022	86	**1108**
00291	EMULSIFIED ASPHALT RS-2 (INSIDE BRIDGE LIMITS)	44		**44**
	.			

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	NONE	R2A

KY 132 CURVE CORRECTION

GENERAL & PAVING SUMMARY

LT STA. 14+25 TO LT STA. 14+75
TRANSITION EARTH SHOULDER
FROM 11.44 TO 13.00.

LT STA. 14+25 TO LT STA. 14+75
TRANSITION PAVEMENT
FROM 9.30 TO 11.00.

STA. 14+25 CONST. 19'
PAVEMENT EDGE KEY.

LT STA. 15+96.5 TO LT STA. 16+46.5 CONST.
ONE GUARDRAIL END TREATMENT TYPE 1.

LT STA. 16+46.5 TO LT STA. 16+84 CONST.
37.5 LF OF GUARDRAIL-STEEL W BEAM-S FACE.

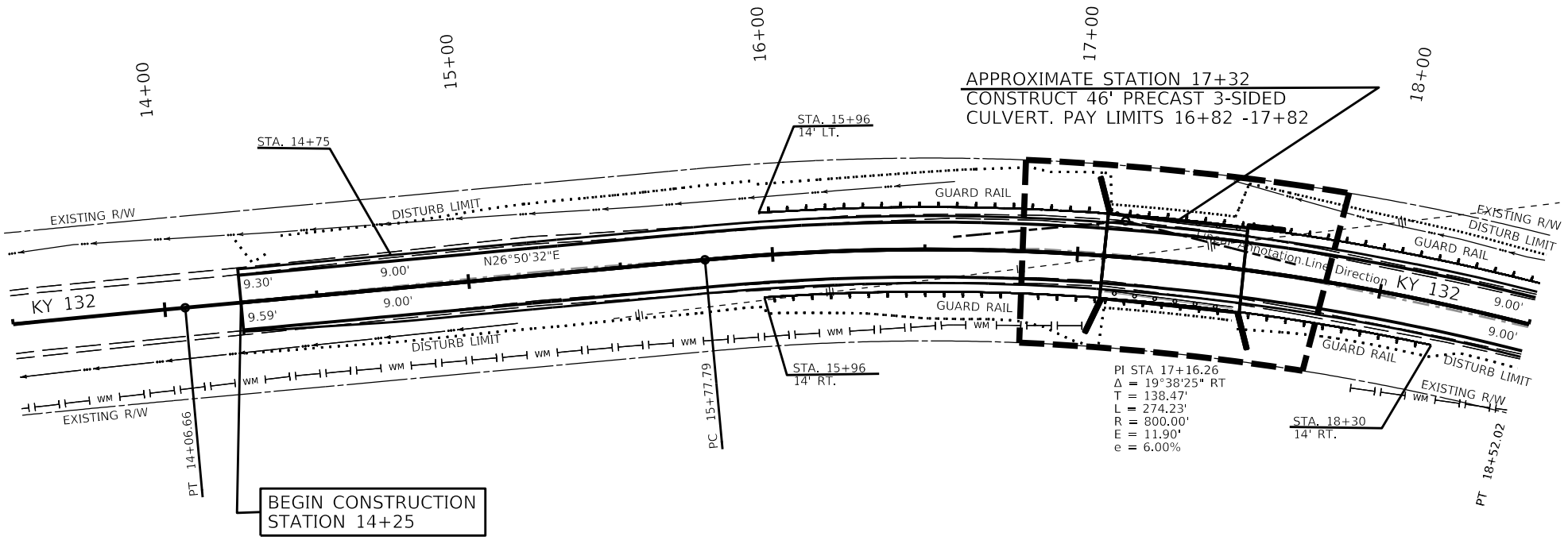
LT STA. 16+84 TO LT STA. 17+09 CONST.
25 LF OF GUARDRAIL-STEEL W BEAM-S FACE A

LT STA. 17+09 TO LT STA. 17+55 CONST.
46 LF OF GUARDRAIL-STEEL W BEAM-S FACE BR.

LT STA. 17+55 TO LT STA. 17+80 CONST.
25 LF OF STEEL "W" BEAM GUARDRAIL
SINGLE FACE "A".

LT STA. 17+80 TO LT STA. 18+50 CONST.
70 LF OF GUARDRAIL-STEEL W BEAM-S FACE.

APPROXIMATE STATION 17+32 REMOVE EXISTING
STRUCTURE IN ACCORDANCE WITH SECTION
203 OF THE SPECIFICATIONS.



RT STA. 14+25 TO RT STA. 14+75
TRANSITION EARTH SHOULDER
FROM 10.59 TO 13.00.

RT STA. 14+25 TO RT STA. 14+75
TRANSITION PAVEMENT
FROM 9.59 TO 11.00.

RT STA. 15+96.5 TO RT STA. 16+46.5 CONST.
ONE GUARDRAIL END TREATMENT TYPE 1.

RT STA. 16+46.5 TO RT STA. 16+84 CONST.
37.5 LF OF GUARDRAIL-STEEL W BEAM-S FACE.

RT STA. 16+84 TO RT STA. 17+09 CONST.
25 LF OF GUARDRAIL-STEEL W BEAM-S FACE A

RT STA. 17+09 TO RT STA. 17+55 CONST.
46 LF OF GUARDRAIL-STEEL W BEAM-S FACE BR.

RT STA. 17+55 TO LT STA. 17+80 CONST.
25 LF OF STEEL "W" BEAM GUARDRAIL
SINGLE FACE "A".

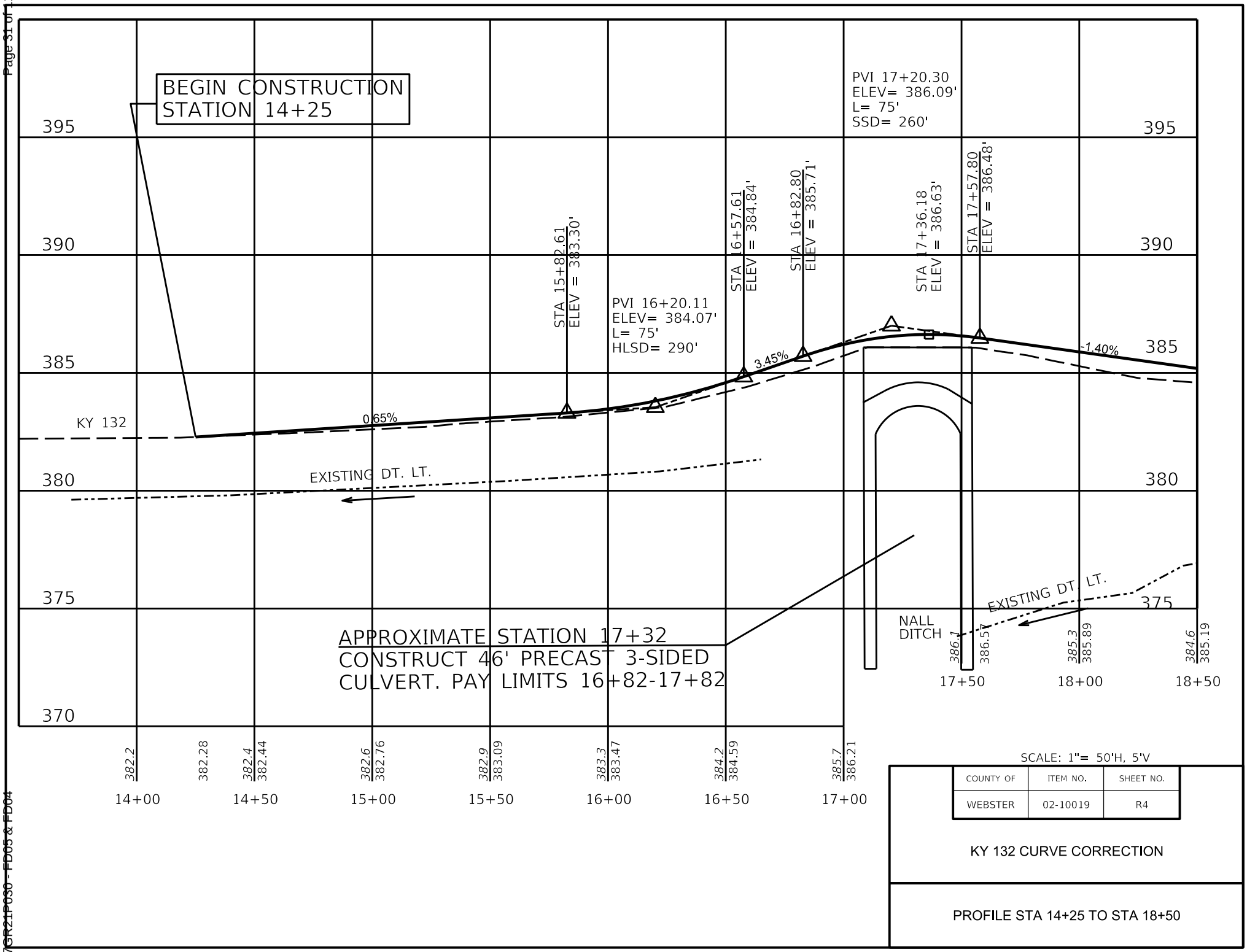
RT STA. 17+80 TO RT STA. 18+30 CONST.
ONE GUARDRAIL END TREATMENT TYPE 1.

SCALE: 1"= 50'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R3

KY 132 CURVE CORRECTION

PLAN STA 14+25 TO STA 18+50



SCALE: 1"= 50'H, 5'V

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R4

KY 132 CURVE CORRECTION

PROFILE STA 14+25 TO STA 18+50

LT STA. 18+50 TO LT STA. 20+05 CONST.
155 LF OF GUARDRAIL-STEEL W BEAM-S FACE.
LT STA. 20+05 TO LT STA. 20+55 CONST.
ONE GUARDRAIL END TREATMENT TYPE 1.

RT STA. 49+48 CONST 16' ENTRACE
WITH 20 TONS OF CRUSHED STONE BASE

STA. 49+15 CONST. 18'
PAVEMENT EDGE KEY.

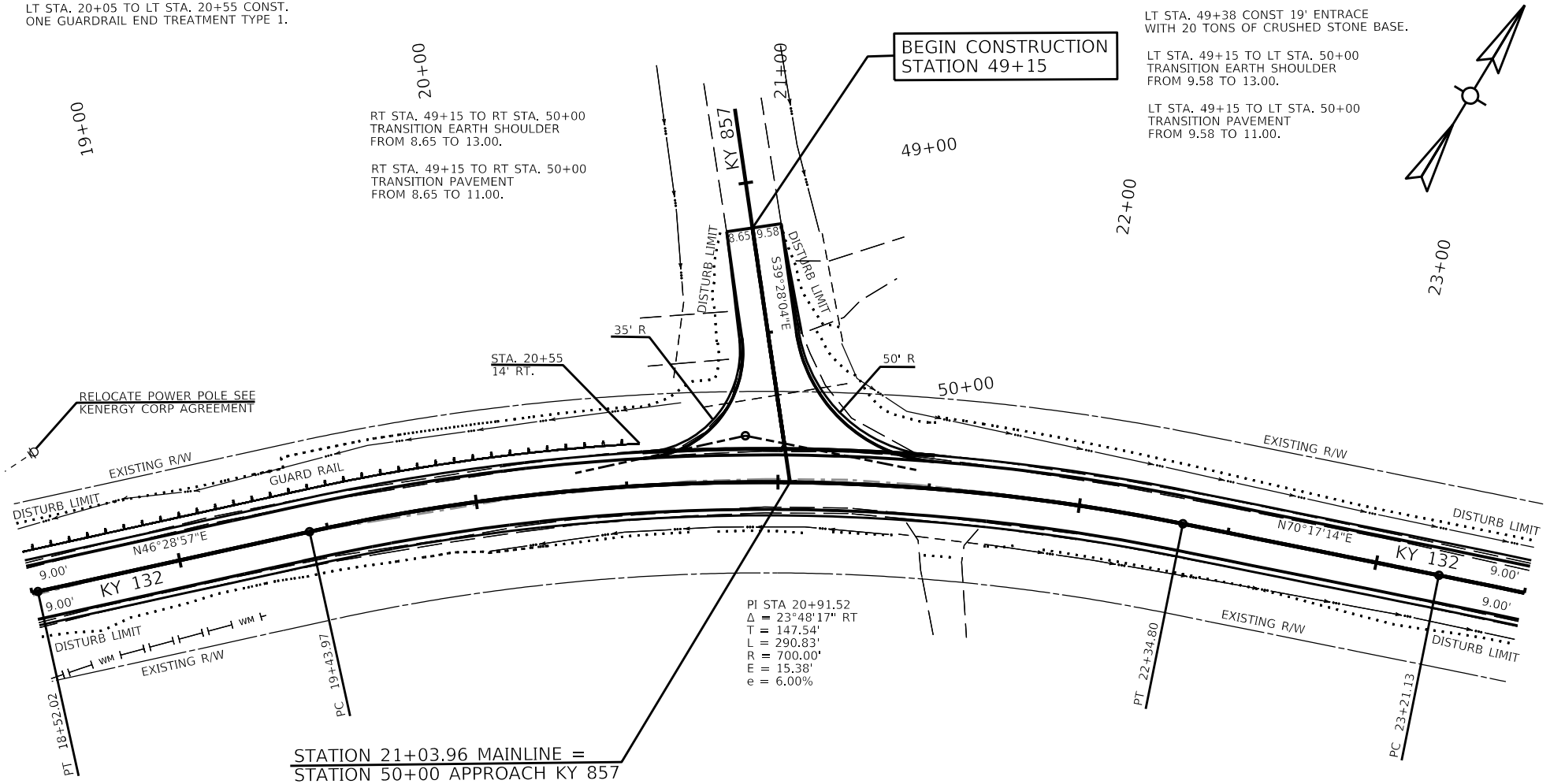
LT STA. 49+38 CONST 19' ENTRACE
WITH 20 TONS OF CRUSHED STONE BASE.

LT STA. 49+15 TO LT STA. 50+00
TRANSITION EARTH SHOULDER
FROM 9.58 TO 13.00.

LT STA. 49+15 TO LT STA. 50+00
TRANSITION PAVEMENT
FROM 9.58 TO 11.00.

RT STA. 49+15 TO RT STA. 50+00
TRANSITION EARTH SHOULDER
FROM 8.65 TO 13.00.

RT STA. 49+15 TO RT STA. 50+00
TRANSITION PAVEMENT
FROM 8.65 TO 11.00.



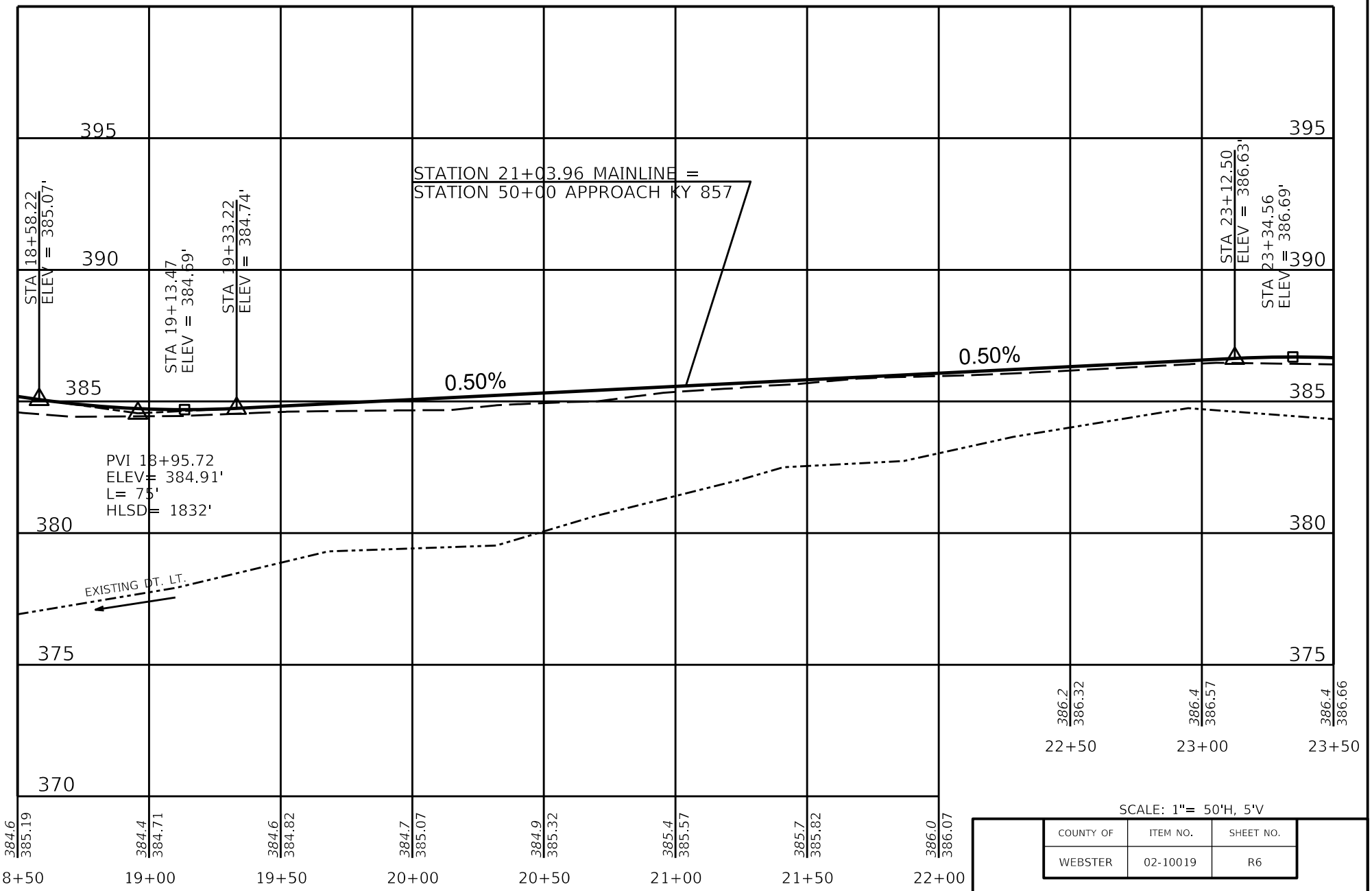
RT STA. 21+56 CONST 15' ENTRACE
WITH 20 TONS OF CRUSHED STONE BASE.

SCALE: 1"= 50'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R5

KY 132 CURVE CORRECTION

PLAN STA 18+50 TO STA 23+50



SCALE: 1"= 50'H, 5'V

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R6

KY 132 CURVE CORRECTION

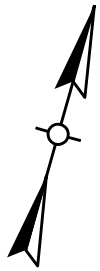
PROFILE STA 18+50 TO STA 23+50

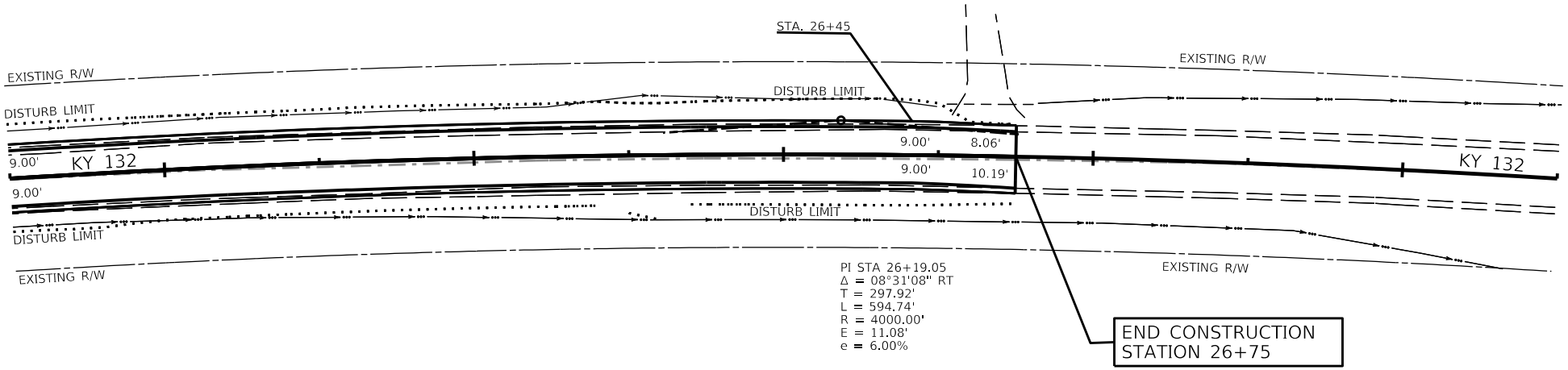
WEBSTER COUNTY
117GR21P030 - FD05 & FD04

STA. 26+75 CONST. 22'
PAVEMENT EDGE KEY.

LT STA. 26+45 TO LT STA. 26+75
TRANSITION EARTH SHOULDER
FROM 13.00 TO 9.97.

LT STA. 14+25 TO LT STA. 14+75
TRANSITION PAVEMENT
FROM 11.00 TO 9.97.





PI STA 26+19.05
Δ = 08°31'08" RT
T = 297.92'
L = 594.74'
R = 4000.00'
E = 11.08'
e = 6.00%

END CONSTRUCTION
STATION 26+75

RT STA. 26+45 TO RT STA. 26+75
TRANSITION EARTH SHOULDER
FROM 13.00 TO 11.87.

RT STA. 26+45 TO RT STA. 26+75
TRANSITION PAVEMENT
FROM 11.00 TO 11.87.

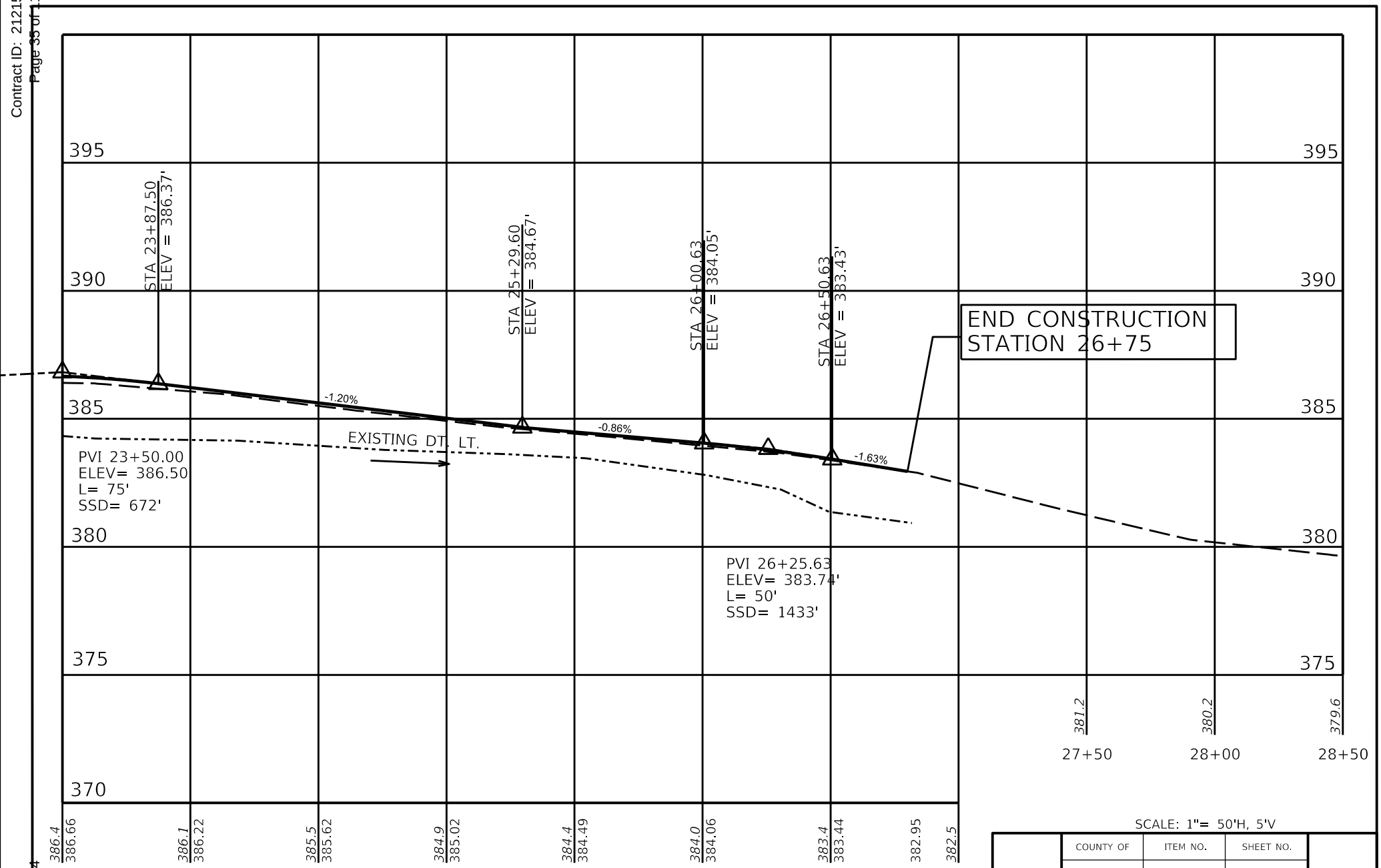
SCALE: 1"= 50'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R7

KY 132 CURVE CORRECTION

PLAN STA 23+50 TO STA 26+75

WEBSTER COUNTY
117GR21P030 - FD05 & FD04



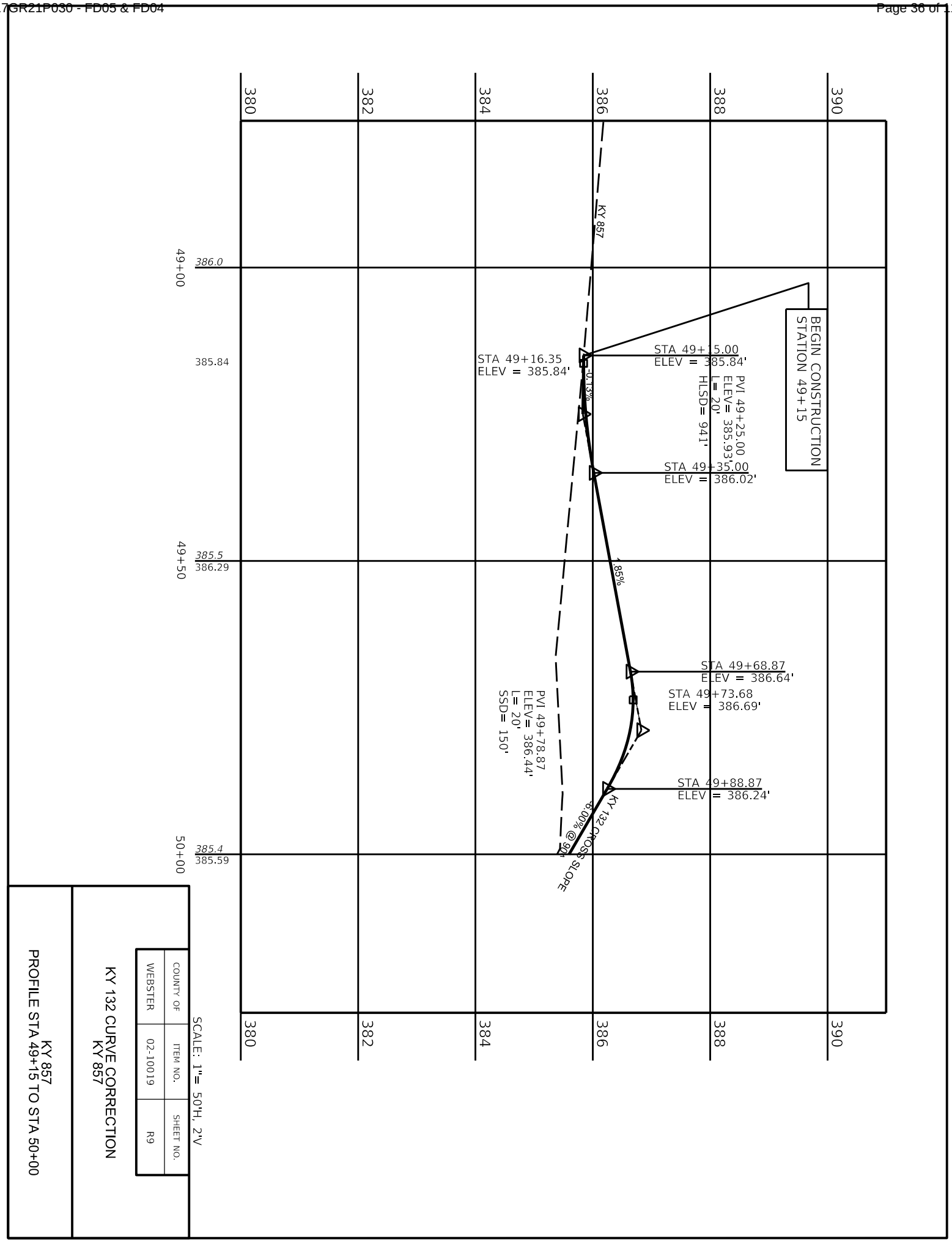
SCALE: 1"= 50'H, 5'V

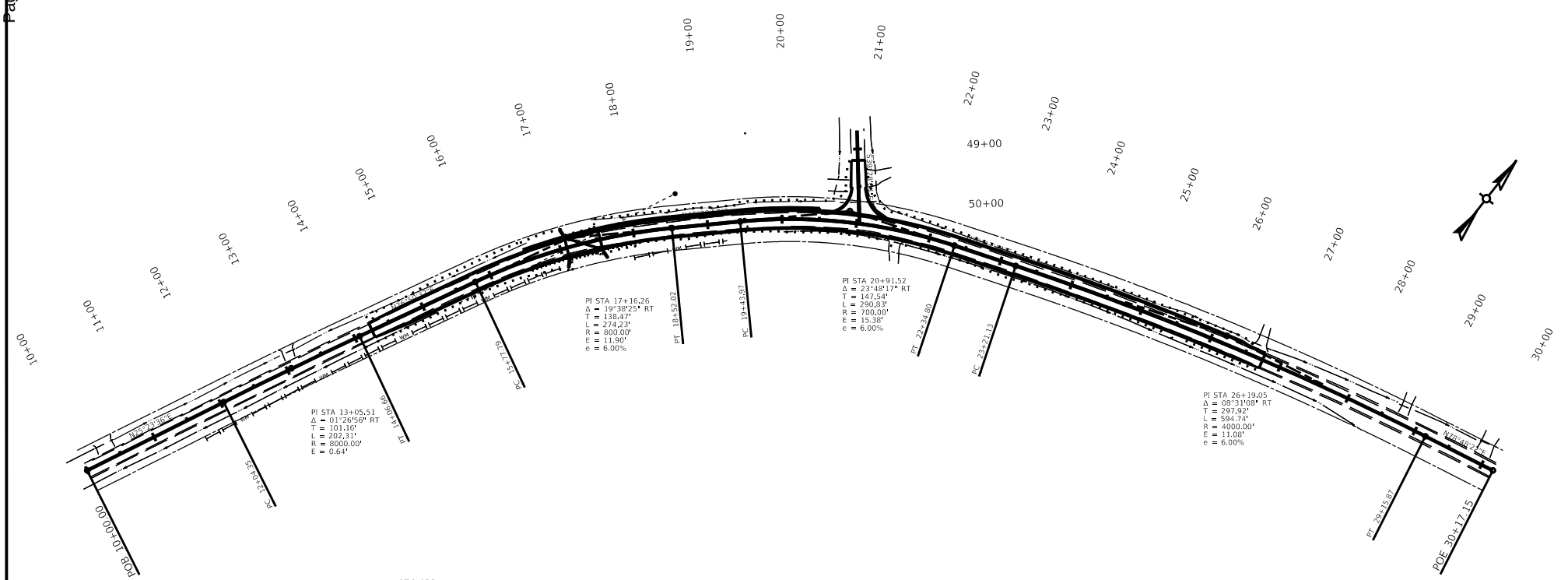
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R8

KY 132 CURVE CORRECTION

PROFILE STA 23+50 TO STA 28+50

WEBSTER COUNTY
117GR21P030 - FD05 & FD04


380
382
384
386
388
390
KY 857
49+00
386.0
385.84
49+50
385.5
386.29
50+00
385.4
385.59
BEGIN CONSTRUCTION
STATION 49+15
STA 49+15.00
ELEV = 385.84'
STA 49+16.35
ELEV = 385.84'
-0.13%
PVI 49+25.00
ELEV= 385.93'
L= 20'
HLSD= 941'
STA 49+35.00
ELEV = 386.02'
1.85%
STA 49+68.87
ELEV = 386.64'
STA 49+73.68
ELEV = 386.69'
PVI 49+78.87
ELEV= 386.44'
L= 20'
SSD= 150'
STA 49+88.87
ELEV = 386.24'
KY 132 CROSS SLOPE
-3.00% @ 90°
SCALE: 1"= 50'H, 2'V
KY 132 CURVE CORRECTION
KY 857
PROFILE STA 49+15 TO STA 50+00
COUNTY OF
WEBSTER
ITEM NO.
02-10019
SHEET NO.
R9



KY 132

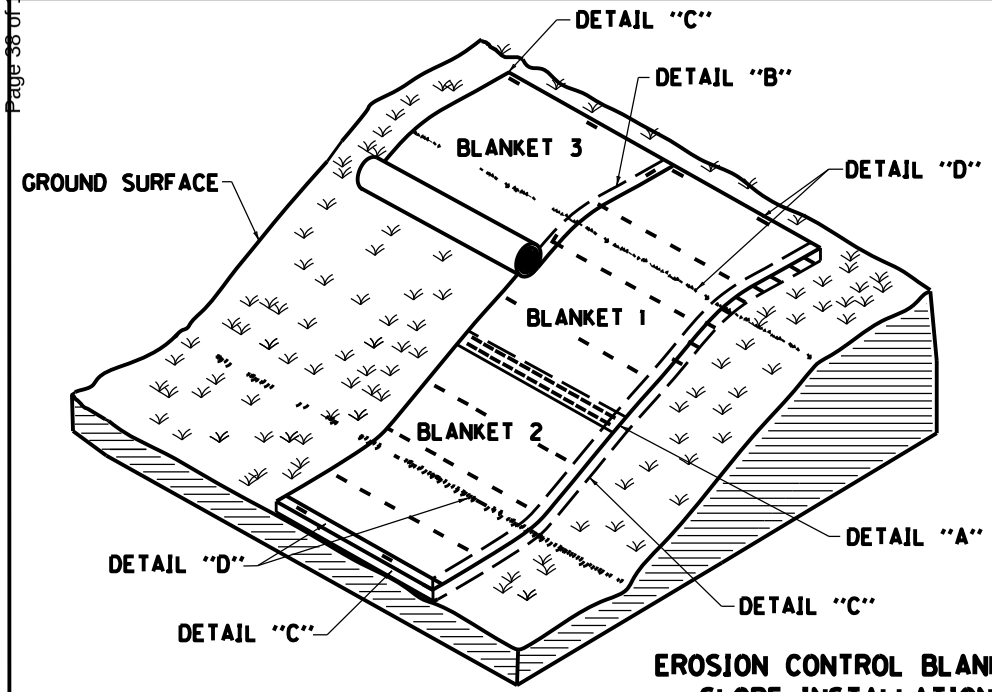
Point Type	Station	Northing	Easting	Radius	Length	Tangent
START	10+00.000	3719787.27	4337321.61			
PC	12+04.349	3719971.88	4337409.24			
PC	12+04.349	3719971.88	4337409.24			
HPI	13+05.508	3720063.26	4337452.62	8000.00	202.31	101.16
PT	14+06.656	3720153.52	4337498.29			
PT	14+06.656	3720153.52	4337498.29			
PC	15+77.787	3720306.22	4337575.56			
PC	15+77.787	3720306.22	4337575.56			
HPI	17+16.261	3720429.77	4337638.09	800.00	274.23	138.47
PT	18+52.017	3720525.12	4337738.51			
PT	18+52.017	3720525.12	4337738.51			
PC	19+43.974	3720588.44	4337805.19			
PC	19+43.974	3720588.44	4337805.19			
HPI	20+91.518	3720690.03	4337912.18	700.00	290.83	147.54
PT	22+34.804	3720739.80	4338051.08			
PT	22+34.804	3720739.80	4338051.08			
PC	23+21.134	3720768.92	4338132.35			
PC	23+21.134	3720768.92	4338132.35			
HPI	26+19.052	3720869.41	4338412.81	4000.00	594.74	297.92
PT	29+15.871	3720927.24	4338705.06			
PT	29+15.871	3720927.24	4338705.06			
END	30+17.150	3720946.91	4338804.41			
KY 857						
START	48+75.19	3720780.798	4337853.393			
END	50+00.00	3720684.443	4337932.731			

SCALE: 1"=200'

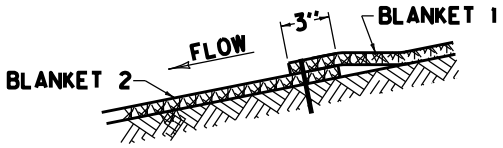
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R10

KY 132 CURVE CORRECTION
KY 857

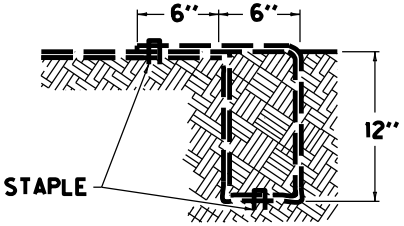
COORDINATE CONTROL SHEET



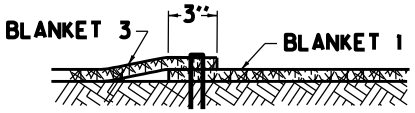
EROSION CONTROL BLANKET
SLOPE INSTALLATION



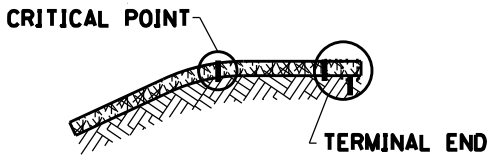
PROFILE VIEW
DETAIL "A"

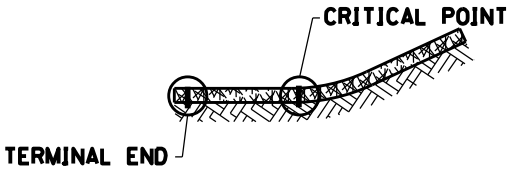


PROFILE VIEW
DETAIL "C"



CROSS SECTION VIEW
DETAIL "B"





CRITICAL POINTS
DETAIL "D"

~ NOTES ~

BID ITEMS AND UNIT TO BID

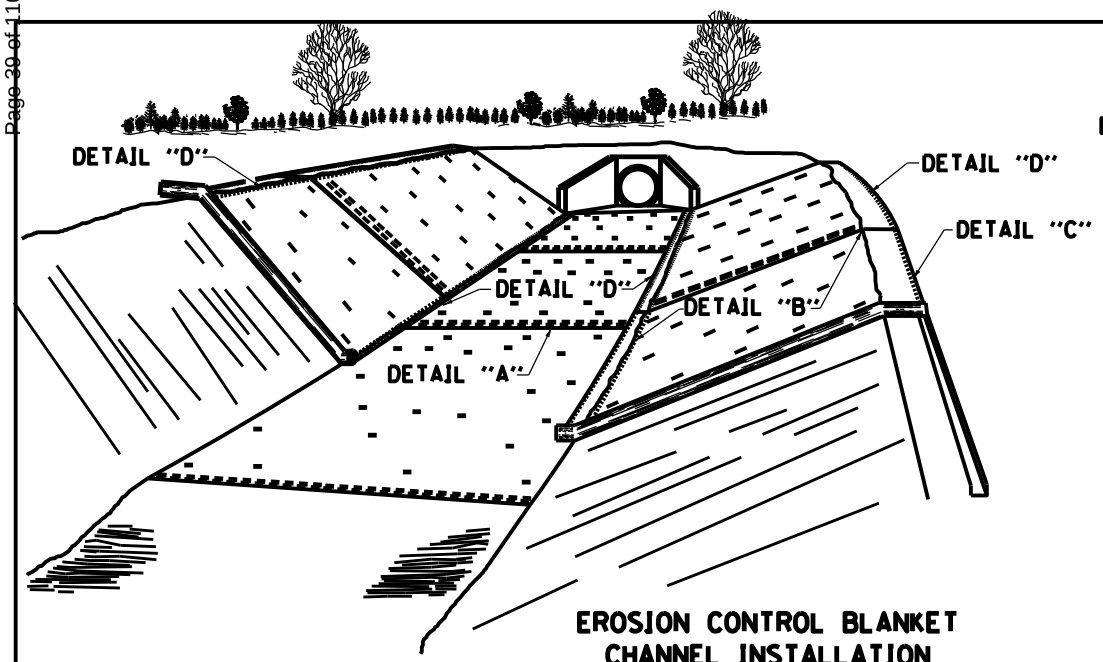
EROSION CONTROL BLANKET	SOYD
SEEDING AND PROTECTION	SOYD

1. CONSTRUCT A 6" X 12" ANCHOR TRENCH AT THE BEGINNING OF THE SLOPE. LINE THE ANCHOR TRENCH WITH EROSION CONTROL BLANKET (ECB) LEAVING 12" EXTENDING PAST THE ANCHOR TRENCH. FASTEN THE ECB MATERIAL INTO THE ANCHOR TRENCH ON 12" CENTERS BACKFILL THE TRENCH WITH TOPSOIL AND COMPACT. COVER THE AREA WITH THE REMAINING 12" OF THE ECB'S TERMINAL END LEAVING 6" TO OVERLAP THE EROSION CONTROL BLANKET. SECURE THE 6" OVERLAP WITH STAPLES ON 12" CENTERS.
2. UNROLL THE ECB PARALLEL TO THE PRIMARY DIRECTION OF WATER FLOW AND PLACE IN DIRECT CONTACT WITH THE SOIL SURFACE. DO NOT STRETCH OR ALLOW THE MATERIAL TO BRIDGE OVER SURFACE INCONSISTENCIES.
3. SECURELY FASTEN THE ECB TO THE SOIL BY INSTALLING STAPLES AT A MINIMUM RATE OF 1.5 PER SQ. YD. ANCHORS SHALL BE SELECTED SO THAT THEY HAVE SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT. INCREASE ANCHORING FREQUENCY FOR SITE CONDITIONS (LOOSE, SANDY, OR WET SOILS) AS DIRECTED BY THE ENGINEER AND MANUFACTURER'S REPRESENTATIVE.
4. OVERLAP EDGES OF PARALLEL AND PERPENDICULAR BLANKETS ALONG THE SLOPE A MINIMUM OF 3" AND SECURE WITH STAPLES AT A MAXIMUM SPACING OF 1'.
5. CONSTRUCT A 6"X 12" ANCHOR TRENCH AT THE TOE OF THE SLOPE FOLLOWING SIMILAR PROCEDURE DENOTED FOR THE TOP OF THE SLOPE ANCHOR TRENCH.
6. ENSURE THAT THE ECB IS IN DIRECT CONTACT WITH THE SOIL SURFACE WITH NO PROJECTIONS OR PROTRUSIONS.
7. APPLY SEEDING AND PROTECTION ACCORDING TO SECTION 212.03.03 USING SEED MIX TYPE I. DIRECTLY AFTER APPLYING SEEDING AND TREATMENTS IN 212.03.03, BUT BEFORE APPLYING MULCHING OR HYDROMULCHING; INFILL THE VOID SPACES IN THE ECB WITH 1/2" OF TOPSOIL. TOPSOIL IS THE SOIL PROFILE DEFINED TECHNICALLY AS "A" HORIZON BY THE SOIL SCIENCE SOCIETY OF AMERICA. USE LOOSE, FRIABLE TOPSOIL THAT IS FREE OF STONES 1" OR GREATER IN OVERALL DIMENSIONS, ADMIXTURE OF SUBSOIL, REFUSE, STUMPS, ROOTS, BRUSH, WEEDS AND OTHER MATERIALS THAT PREVENT THE FORMATION OF A SUITABLE SEED BED. DO NOT USE TOPSOIL FROM SITES HAVING JOHNSON GRASS, CANADA THISTLE, QUACK GRASS, NODDING THISTLE OR EXCESSIVE AMOUNTS OF WEEDS OR THEIR RHIZOMES.

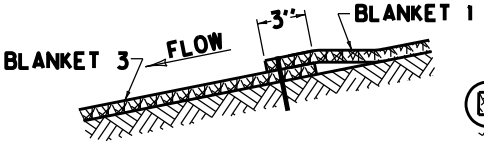
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R11

EROSION CONTROL BLANKET
SLOPE INSTALLATION

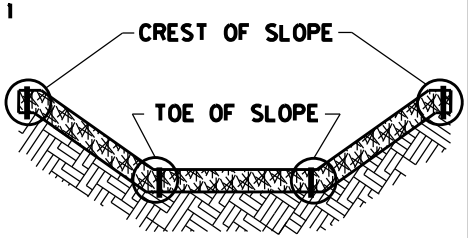
STANDARD DRAWING NO. RDI-040-01



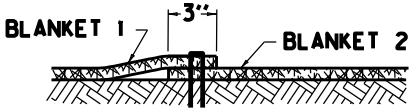
EROSION CONTROL BLANKET
CHANNEL INSTALLATION



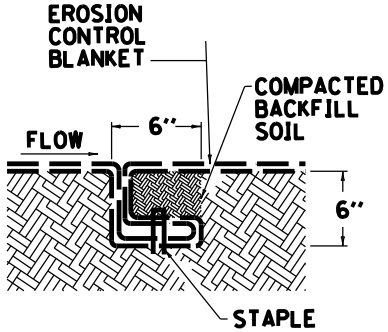
PROFILE VIEW
DETAIL "A"



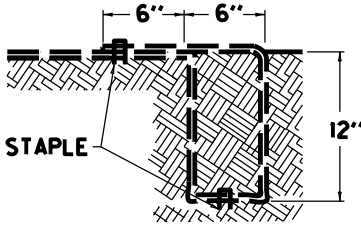
CRITICAL POINTS
DETAIL "D"



CROSS SECTION VIEW
DETAIL "B"



CHANNEL CHECK SLOT ③



PROFILE VIEW
DETAIL "C"

~ NOTES ~

BID ITEMS AND UNIT TO BID

EROSION CONTROL BLANKET	SOYD
SEEDING AND PROTECTION	SOYD

1. CONSTRUCT A 6" X 12" ANCHOR TRENCH AT THE BEGINNING OF THE CHANNEL. LINE THE ANCHOR TRENCH WITH EROSION CONTROL BLANKET (ECB) LEAVING 12" EXTENDING PAST THE ANCHOR TRENCH. FASTEN THE ECB MATERIAL INTO THE ANCHOR TRENCH ON 12" CENTERS BACKFILL THE TRENCH WITH TOPSOIL AND COMPACT. COVER THE AREA WITH THE REMAINING 12" OF THE ECB'S TERMINAL END LEAVING 6" TO OVERLAP THE EROSION CONTROL BLANKET. SECURE THE 6" OVERLAP WITH STAPLES ON 12" CENTERS.
2. UNROLL THE ECB PARALLEL TO THE PRIMARY DIRECTION OF WATER FLOW AND PLACE IN DIRECT CONTACT WITH THE SOIL SURFACE. DO NOT STRETCH OR ALLOW THE MATERIAL TO BRIDGE OVER SURFACE INCONSISTENCIES.

③ EXCAVATE 6" X 6" CHECK SLOTS EVERY 25' ALONG THE LENGTH OF THE CHANNEL. LINE THE SIDE AND BOTTOM OF THE SLOT WITH THE ECB AND THEN PULL BACK OVER. FASTEN WITH STAPLES ON 12" CENTERS. FILL THE CHECK SLOT WITH TOPSOIL, COMPACT, AND CONTINUE UNROLLING ECB DOWN THE CHANNEL.

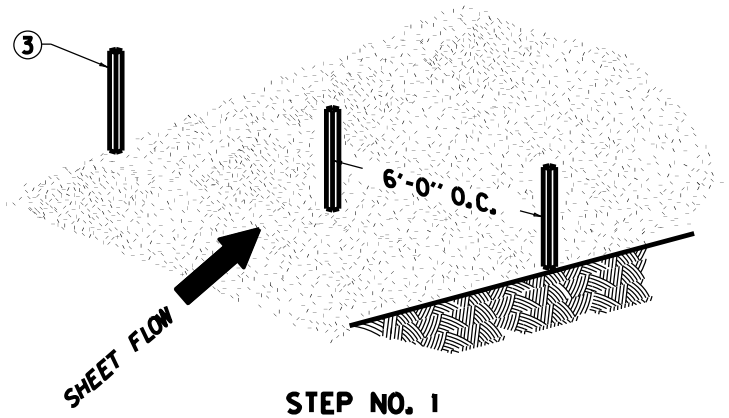
4. CONTINUE UNROLLING THE ECB DOWNSTREAM OVER THE COMPACTED SLOT TO THE NEXT CHECK SLOT OR TERMINAL ANCHOR TRENCH. IF MORE THAN ONE SECTION OF ECB IS USED OVERLAP UPSTREAM ECB OVER TOP OF THE DOWNSTREAM ECB 3" AND SECURE STAPLES ON 12" CENTERS.
5. SECURE ECB WHILE UNROLLING ON SIDESLOPES AND CHANNEL BOTTOMS WITH STAPLES AT A FREQUENCY THE TABLE INDICATES. USE STAPLES HAVING SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT. INCREASE ANCHORING FREQUENCY AS DIRECTED BY THE ENGINEER AND MANUFACTURER'S REPRESENTATIVE.
6. APPLY SEEDING AND PROTECTION ACCORDING TO SECTION 212.03.03 USING SEED MIX TYPE I. DIRECTLY AFTER APPLYING SEEDING AND TREATMENTS IN 212.03.03, BUT BEFORE APPLYING MULCHING OR HYDROMULCHING; INFILL THE VOID SPACES IN THE ECB WITH 1/2" OF TOPSOIL. TOPSOIL IS THE SOIL PROFILE DEFINED TECHNICALLY AS "A" HORIZON BY THE SOIL SCIENCE SOCIETY OF AMERICA. USE LOOSE, FRIABLE TOPSOIL THAT IS FREE OF STONES 1" OR GREATER IN OVERALL DIMENSIONS, ADMIXTURE OF SUBSOIL, REFUSE, STUMPS, ROOTS, BRUSH, WEEDS AND OTHER MATERIALS THAT PREVENT THE FORMATION OF A SUITABLE SEED BED. DO NOT USE TOPSOIL FROM SITES HAVING JOHNSON GRASS, CANADA THISTLE, QUACK GRASS, NODDING THISTLE OR EXCESSIVE AMOUNTS OF WEEDS OR THEIR RHIZOMES.

SLOPE GRADE	ANCHORING FREQUENCY
UP TO 2H:1V	1.5 ANCHORS/SOYD
2H:1V TO 1H:1V	2.0 ANCHORS/SOYD
STEEPER THAN 1H:1V AND CHANNEL BOTTOMS	3.0 ANCHORS/SOYD

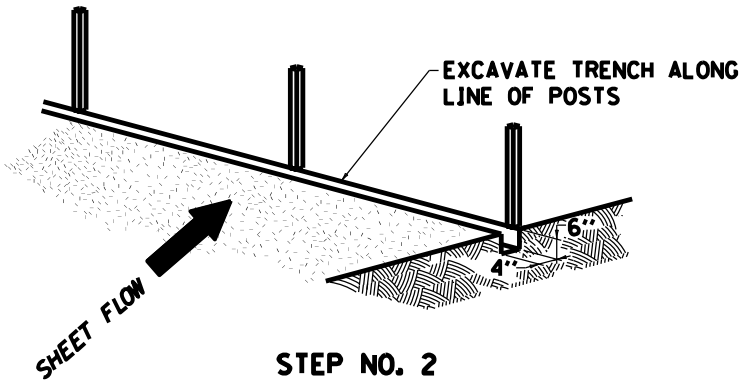
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R12

EROSION CONTROL BLANKET
CHANNEL INSTALLATION

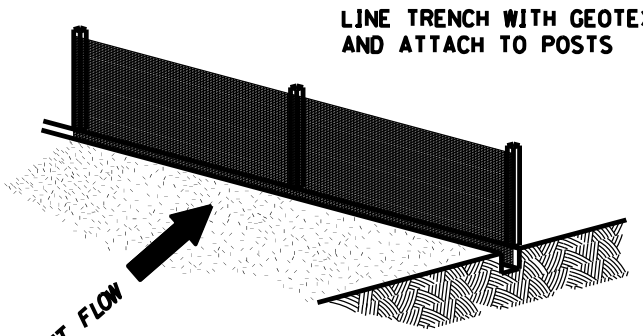
STANDARD DRAWING NO. RDI-041-01



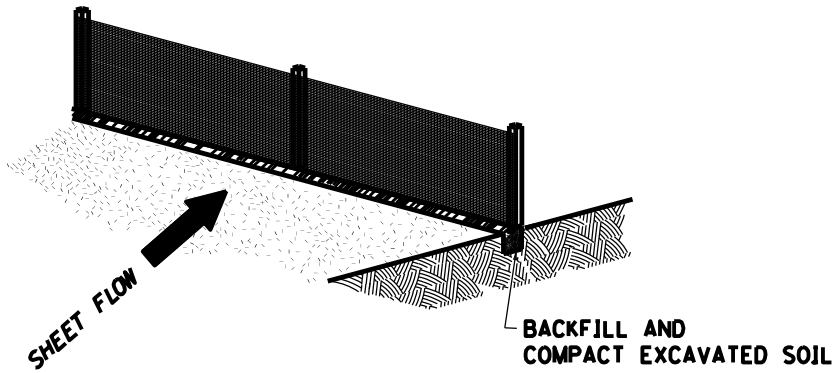
STEP NO. 1



STEP NO. 2



STEP NO. 3

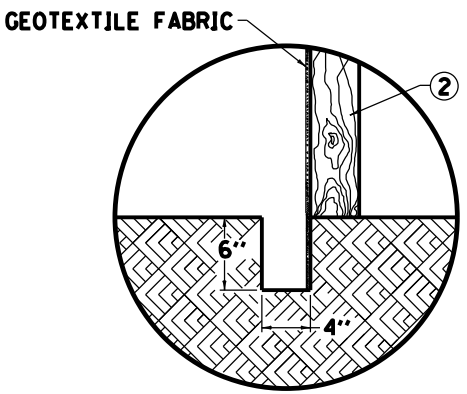


STEP NO. 4

~ NOTES ~

BID ITEM AND UNIT TO BID
TEMP SILT FENCE LF

1. SEE STANDARD SPECIFICATIONS FOR POST SIZE, GEOTEXTILE FABRIC, WIRE STAPLES AND ALL OTHER PERTINENT INFORMATION.
2. POSTS MAY BE WOODEN OR METAL T-SECTION.
3. POSTS SHALL BE SET 1'-4" DEEP.

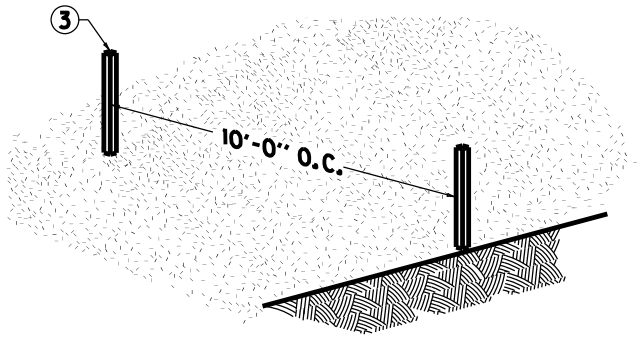


SECTIONAL DETAIL

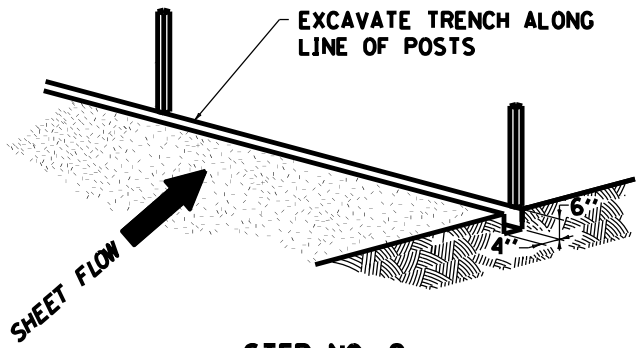
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R13

TEMPORARY SILT FENCE

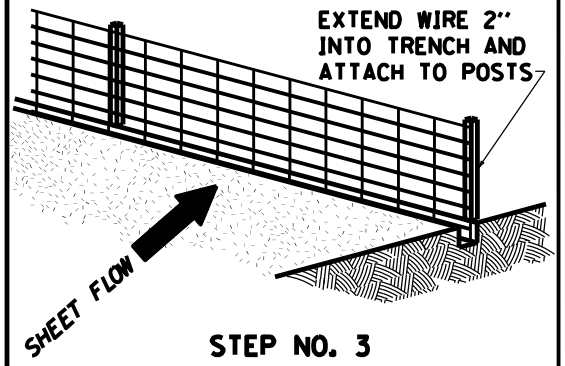
STANDARD DRAWING NO. RDX-210-03



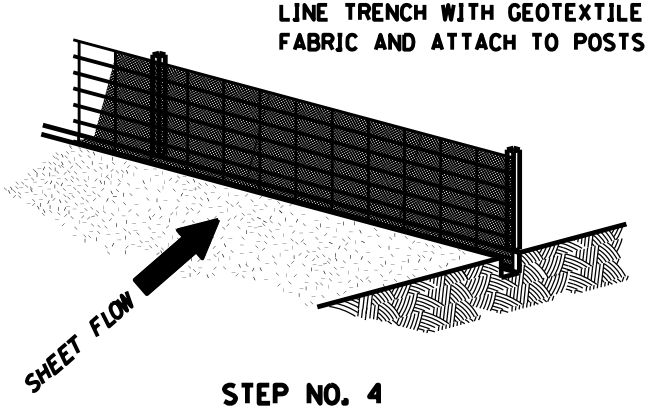
STEP NO. 1



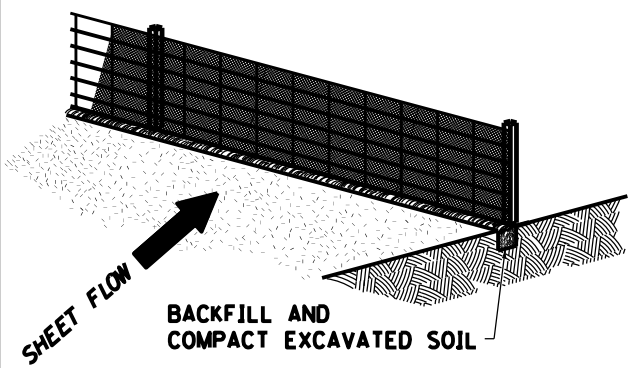
STEP NO. 2



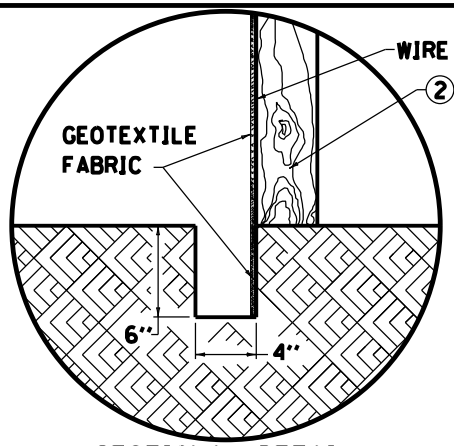
STEP NO. 3



STEP NO. 4



STEP NO. 5



SECTIONAL DETAIL

~ NOTES ~

BID ITEM AND UNIT TO BID
TEMP SILT FENCE LF

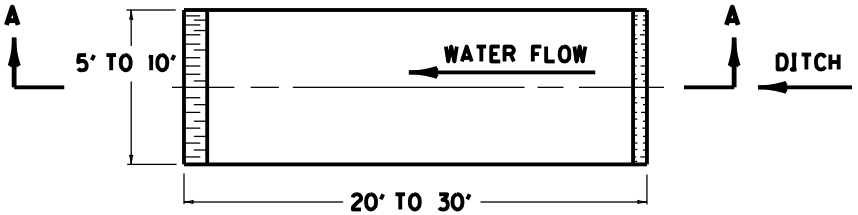
1. SEE STANDARD SPECIFICATIONS FOR POST SIZE, WOVEN WIRE FENCE FABRIC, GEOTEXTILE FABRIC, WIRE STAPLE AND ALL OTHER PERTINENT INFORMATION.
2. POSTS MAY BE WOODEN OR METAL T-SECTION.
3. POSTS SHALL BE SET 1'-4" DEEP.

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R14

TEMPORARY SILT FENCE
WITH
WOVEN WIRE FENCE FABRIC

STANDARD DRAWING NO. RDX-215-01

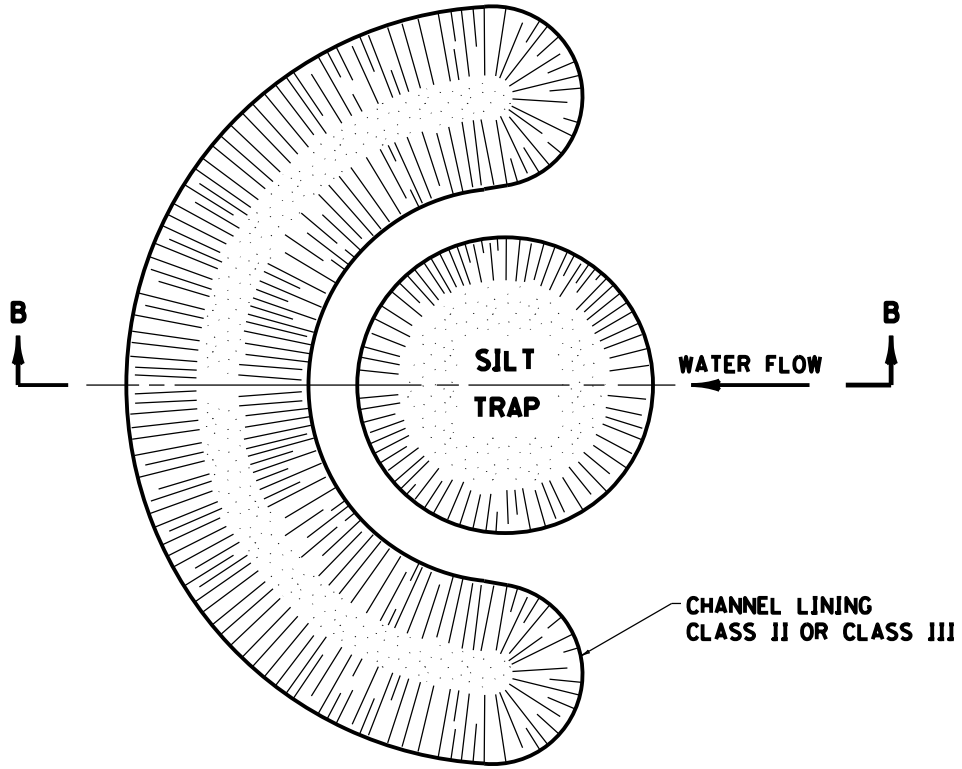
ALTERNATE NO. 1



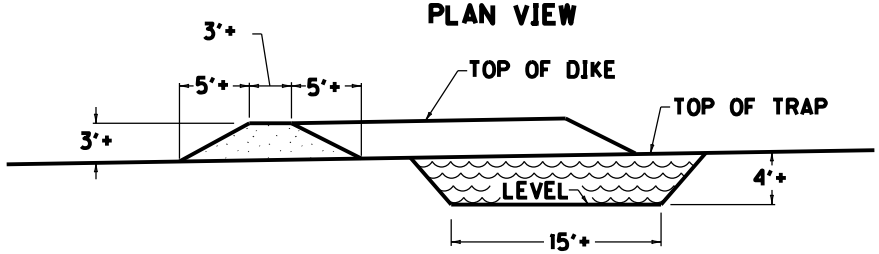
PLAN VIEW

SECTION A-A

ALTERNATE NO. 2



PLAN VIEW



SECTION B-B

~ NOTES ~

BID ITEMS AND UNIT TO BID

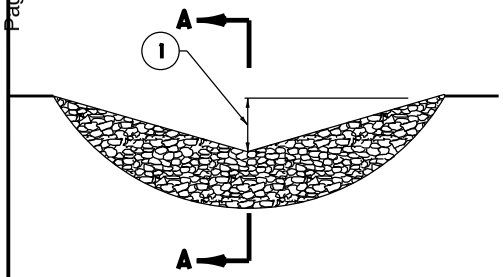
SILT TRAP TYPE A	EACH
CLEAN SILT TRAP TYPE A	EACH

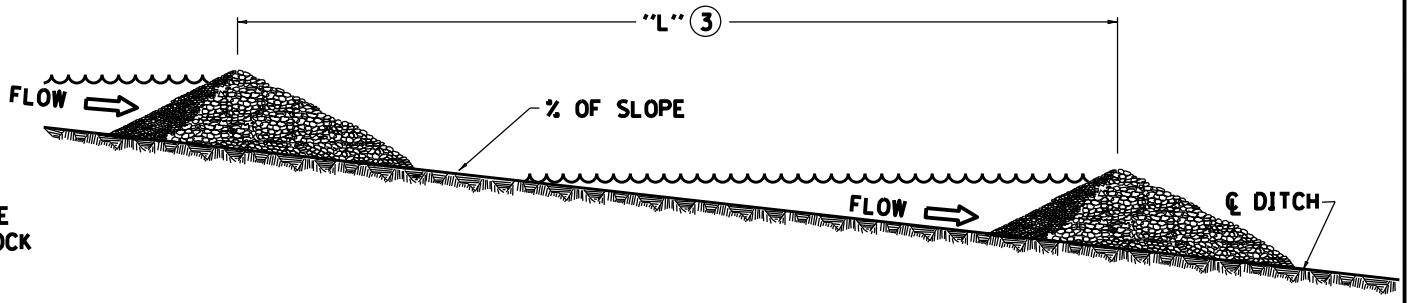
1. THE SIZE, SHAPE AND LOCATION OF A TRAP MAY BE ADJUSTED FROM THAT SHOWN IN THE PLANS, AS DIRECTED BY THE ENGINEER.
2. THE SILT TRAP SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER TO MEET VOLUME REQUIREMENTS INDICATED ON THE PLANS.
3. MATERIAL REMOVED IN THE PROCESS OF CONSTRUCTING SILT TRAP TYPE A SHALL BE WASTED ON SITE AT NO ADDITIONAL COST.

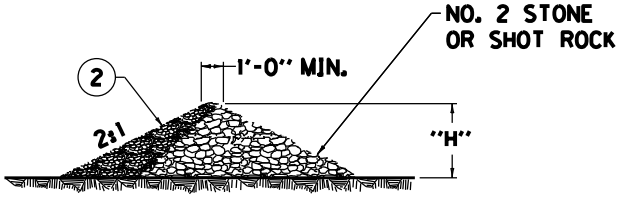
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R15

SILT TRAP TYPE A

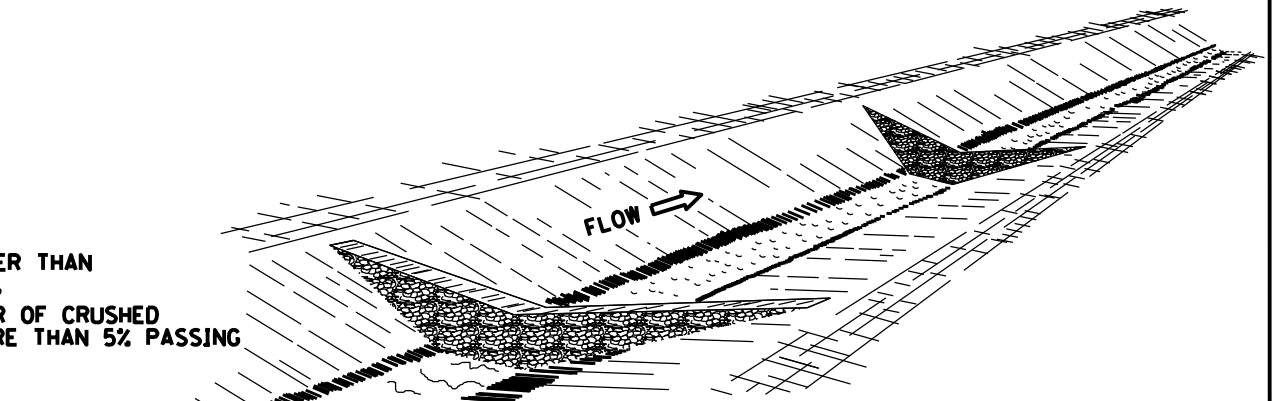
STANDARD DRAWING NO. RDX-220-05







SECTION "A-A"



- NOTES -

BID ITEMS AND UNIT TO BID

SILT TRAP TYPE B	EACH
CLEAN SILT TRAP TYPE B	EACH

1. MIDDLE OF SILT TRAP SHALL BE A MINIMUM OF 1'-0" LOWER THAN SIDES SO FLOW WILL NOT BYPASS TRAP OR ERODE BANKS.
2. UPSTREAM FACE OF SILT TRAP SHALL BE A 4" MIN. LAYER OF CRUSHED AGGREGATE HAVING 100% PASSING A 3" SIEVE AND NO MORE THAN 5% PASSING A NO. 8 SIEVE (SEE SECTION "A-A").
3. $L = \frac{H}{\text{SLOPE OF DITCH}}$
4. SPACE SILT TRAPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. SILT TRAP TYPE B SHALL BE USED ON ALL SLOPES GREATER THAN 2%.
6. SILT TRAP TYPE B MAY BE USED ON ALL SLOPES LESS THAN 2%.

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R16

SILT TRAP TYPE B

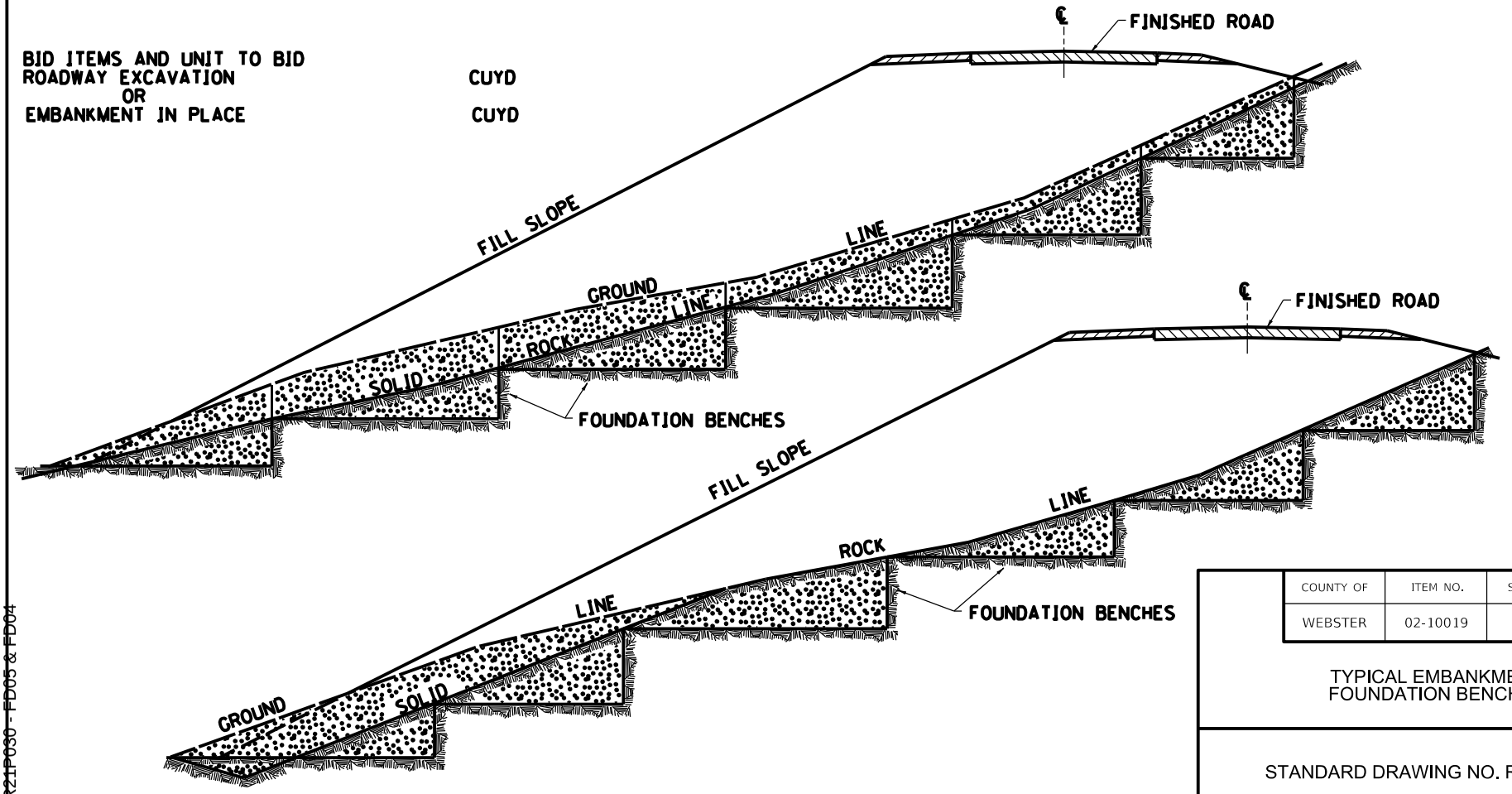
STANDARD DRAWING NO. RDX-225-01

~ NOTES ~

1. THIS TREATMENT FOR EMBANKMENT FOUNDATION BENCHES, AS INDICATED ON THIS SHEET, SHALL BE ACCEPTED AS GUIDES FOR HIGHWAY DESIGN, HOWEVER, ALL THE CONDITIONS THAT WILL BE ENCOUNTERED CANNOT BE SHOWN, SO THE DESIGNER MUST GIVE CONSIDERABLE THOUGHT TO THE LOCATIONS AND DIMENSIONS OF THESE BENCHES.
2. DEFINITE DESIGN INFORMATION CANNOT BE ESTABLISHED AS TO THE SIZE OF THESE BENCHES, DUE TO THE IRREGULARITIES AND THE DIFFERENT RATES OF INCLINE OF THE EXISTING CROSS SECTION, HOWEVER, IT IS GENERALLY BELIEVED THAT A 6' TO 12' RISE AND A 20' TO 35' HORIZONTAL RUN IS FAIRLY TYPICAL WITH A 15' HORIZONTAL RUN BEING THE MINIMUM.
3. WHEN THE INCLINE OF THE CROSS SECTION IS 15% OR GREATER THESE EMBANKMENT FOUNDATION BENCHES SHALL BE CONSTRUCTED IN THE ORIGINAL SLOPE AS THE EMBANKMENT IS CONSTRUCTED IN COMPACTED LAYERS OR LIFTS.
4. WHEN EMBANKMENT FOUNDATION BENCHES ARE SHOWN ON THE CROSS SECTION, THE VOLUME SHALL BE COMPUTED AS ROADWAY EXCAVATION OR EMBANKMENT IN PLACE AS APPLICABLE AND SHOWN IN THE SHEET TOTALS AND BROUGHT FORWARD TO BE INCLUDED IN THE TOTAL EARTHWORK WITH THE NOTE "TOTAL INCLUDES "X" NUMBER OF CUBIC YARDS FROM EMBANKMENT FOUNDATION BENCHES."
5. THE EXCAVATION FROM THESE BENCHES WILL NOT BE SHOWN IN THE DISTRIBUTION OF QUANTITIES BUT THEY WILL DEFINITELY BE A PAY QUANTITY BY VIRTUE OF THE FACT THAT THEY ARE INCLUDED IN THE TOTAL OF ROADWAY EXCAVATION QUANTITIES.
6. NO QUANTITIES WILL BE ALLOWED FOR THE REFILLING OF THESE BENCHES, SINCE SUPPOSEDLY, THE MATERIAL THAT WAS EXCAVATED WILL BE PROCESSED AND PLACED BACK IN THESE BENCHES.
7. IF THE CROSS SECTION IS AN EARTH ONE, THAT IS IF NO ROCK IS SHOWN, THEN THE FOUNDATION BENCHES SHALL BE INDICATED ON THE CROSS SECTION AND CONSTRUCTED AS SHOWN BY THE DRAWING AND THE VOLUME OF EXCAVATION BECOMES A PAY ITEM AS ROADWAY EXCAVATION OR EMBANKMENT IN PLACE AS APPLICABLE, IN OTHER WORDS, SUPPORT BENCHING OF EARTH SECTIONS SHALL BE GIVEN SAME TREATMENT AS ROCK OR NEAR ROCK SECTION.
8. SHOULD IT BE EVIDENT, AT THE TIME OF CONSTRUCTION, THAT THE ENGINEER FINDS AND SO DIRECTS THAT THE EMBANKMENT FOUNDATION BENCHING IS NECESSARY AND IT IS NOT SO INDICATED ON THE DESIGN CROSS SECTIONS THE BASIS OF PAYMENT SHALL BE AS HEREIN BEFORE STATED.

BID ITEMS AND UNIT TO BID

ROADWAY EXCAVATION	CUYD
OR	
EMBANKMENT IN PLACE	CUYD



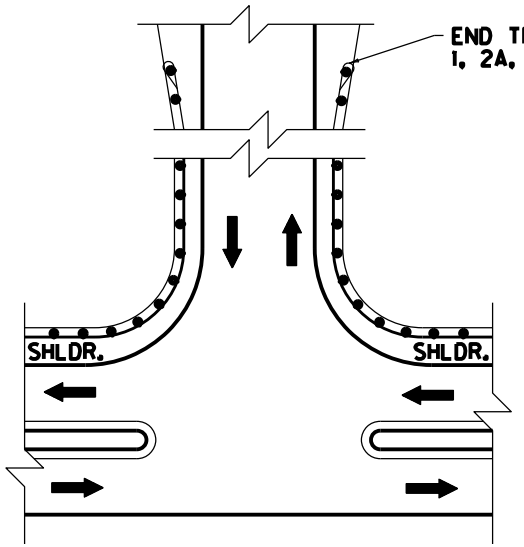
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R17

TYPICAL EMBANKMENT
FOUNDATION BENCHES

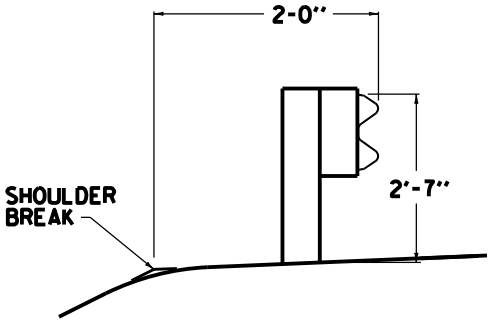
STANDARD DRAWING NO. RGX-010-04

NOTES

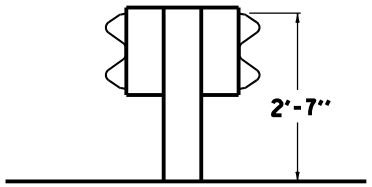
1. FOR END TREATMENT TYPE 4A USE CUR. STD. DWG. RBR-035 FOR OFFSETS.
2. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET; (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).



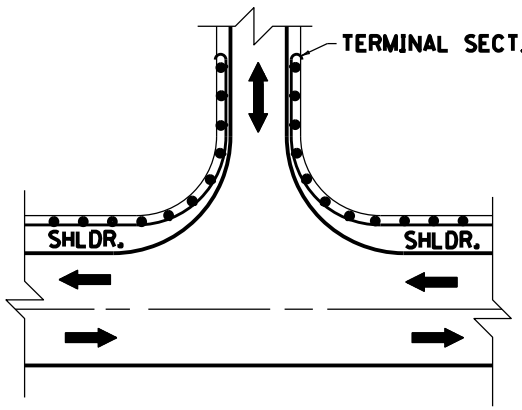
APPROACH ROADS



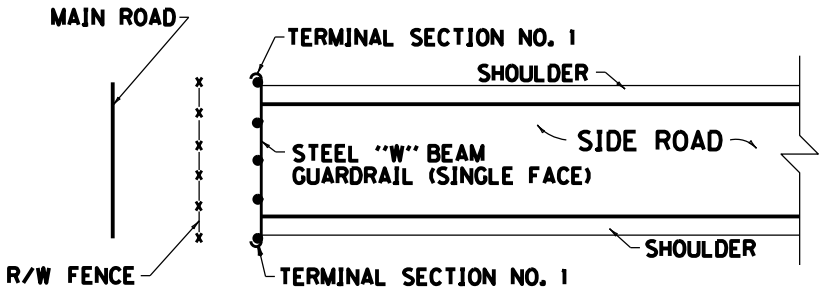
NORMAL GUARDRAIL INSTALLATION



TYPICAL DOUBLE FACE
GUARDRAIL INSTALLATION



ENTRANCES

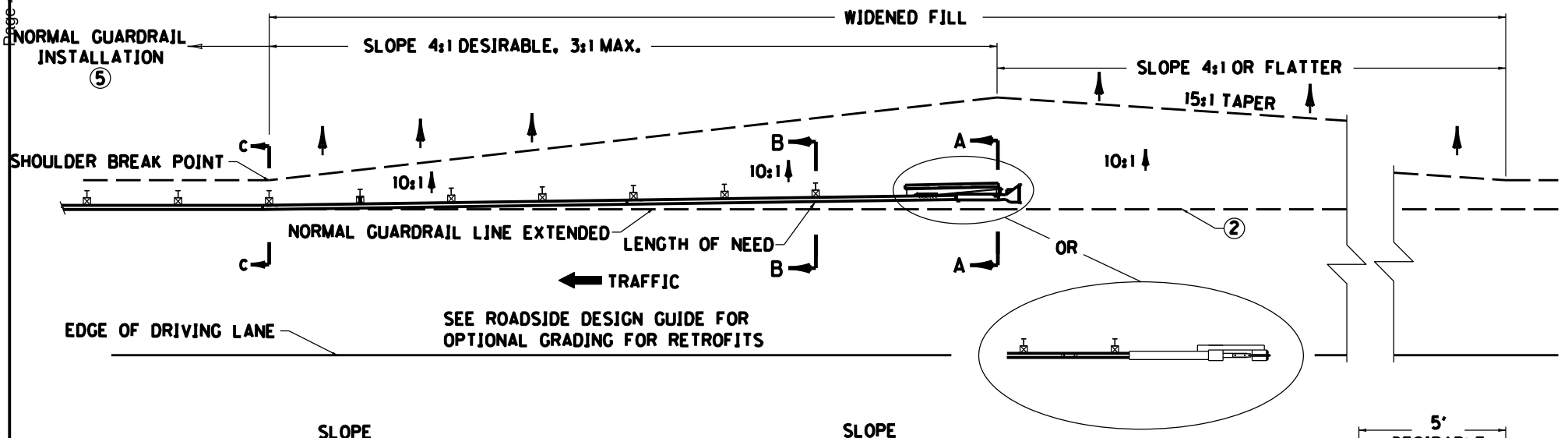


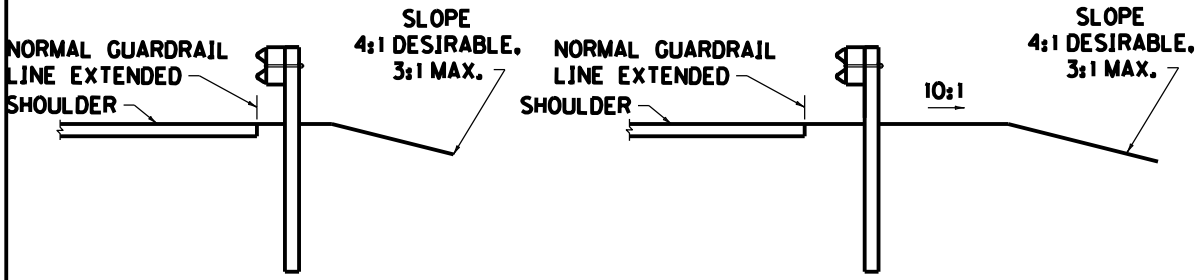
GUARDRAIL USED AS A BARRICADE

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R18

TYPICAL GUARDRAIL INSTALLATIONS

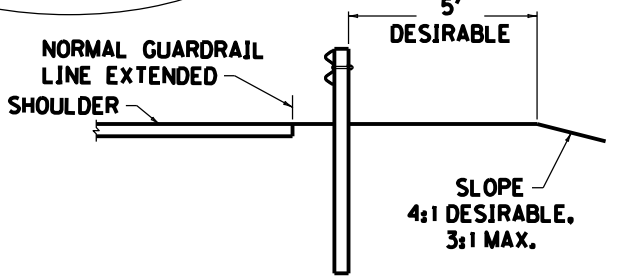
SEPIA 024





SECTION C-C

SECTION B-B



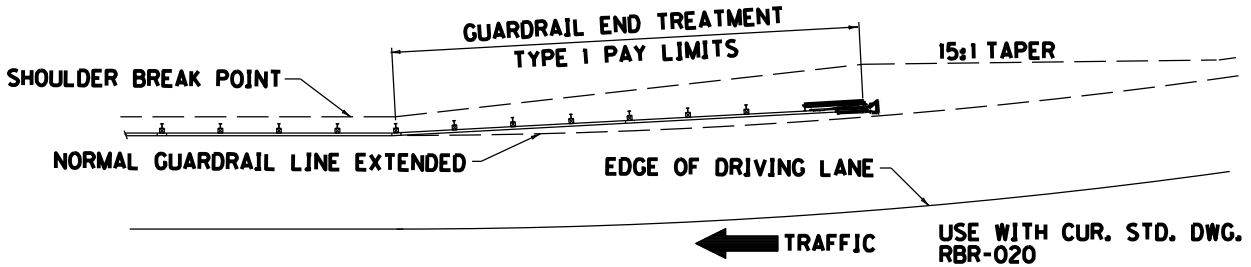
SECTION A-A

~ NOTES ~

BID ITEMS AND UNIT TO BID:

GUARDRAIL END TREATMENT TYPE 1	EACH
ROADWAY OR BORROW EXCAVATION, OR EMBANKMENT IN PLACE	CUYD

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 PLACED ON NORMAL GUARDRAIL LINE EXTENDED.
③ END TREATMENT TYPE 1 MAY BE ATTACHED TO CURVED GUARDRAIL PROVIDED CURVE IS A 550' RADIUS OR MORE. END TREATMENT TYPE 1 SHALL BE INSTALLED ON A STRAIGHT LINE TAPER WITHIN THE PAY LIMITS.
4. INTENDED USE: FILLS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL.
⑤ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.



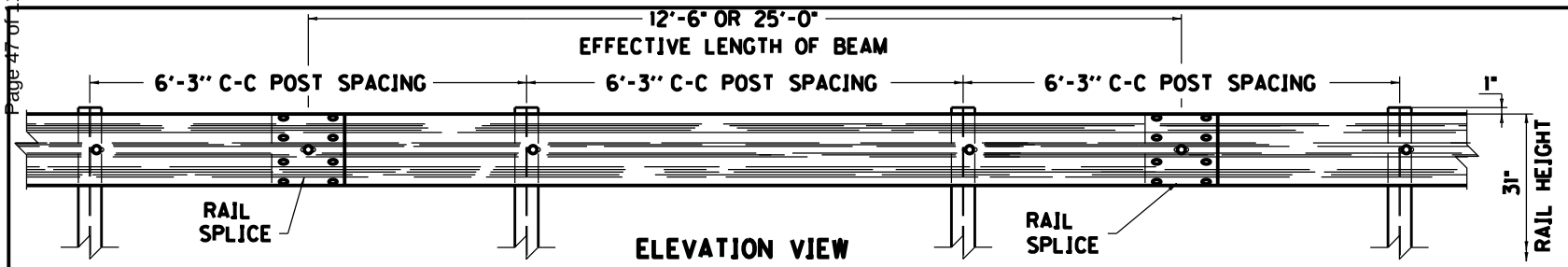
GUARDRAIL END TREATMENT TYPE 1 INSTALLED ON A CURVE ③

USE WITH CUR. STD. DWG. RBR-020

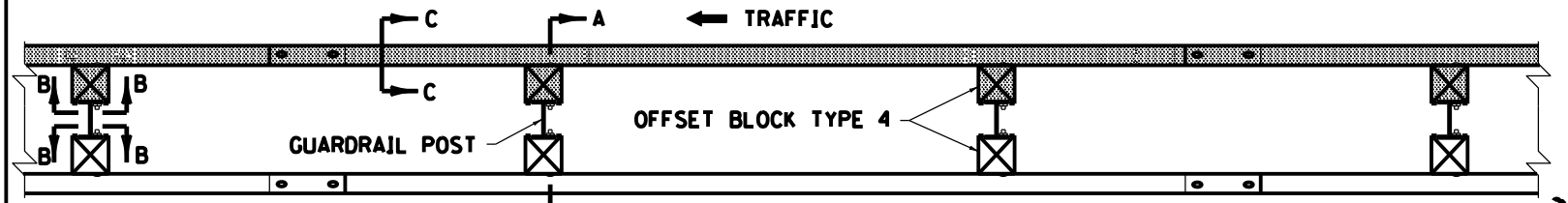
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R19

INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1

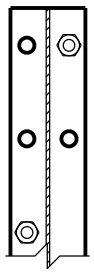
SEPIA 025



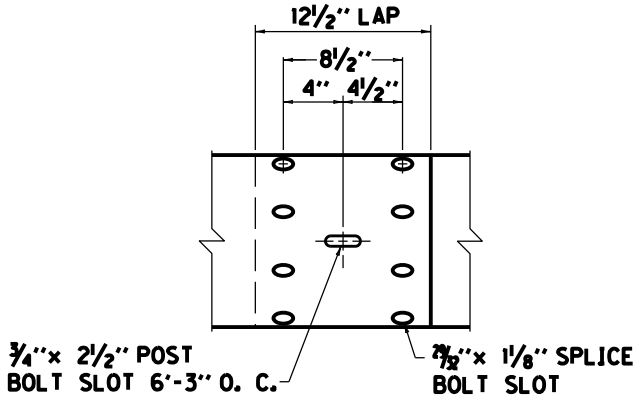
ELEVATION VIEW



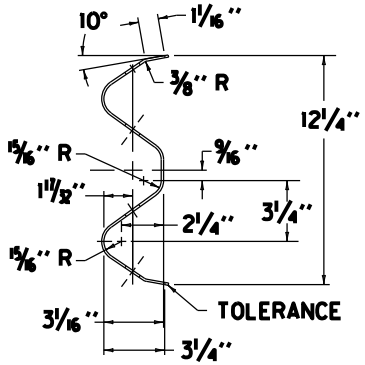
PLAN VIEW
(DOUBLE FACE RAIL OR SINGLE FACE RAIL)



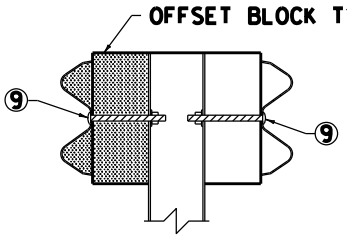
SECTION B-B



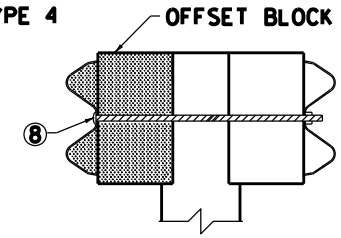
RAIL SPLICE ⑤



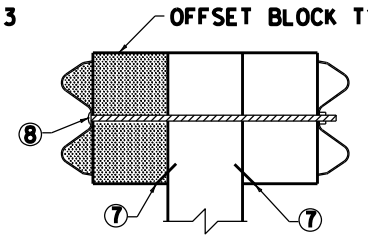
SECTION C-C
(RAIL CORRUGATED SHEET STEEL BEAM)



SECTION A-A
DOUBLE FACE RAIL WITH STEEL POST (W6x9) (TIMBER OR APPROVED COMPOSITE OFFSET BLOCK)



SECTION A-A
DOUBLE FACE RAIL WITH ROUND TIMBER POST



SECTION A-A
DOUBLE FACE RAIL WITH TIMBER POST

NOTES

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

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 + 1¼", -¼"
⑤ 8-⅝"× 1¼" 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 2¼" FOR THREADED ROD.
⑦ GALVANIZED STEEL 10d COMMON COATED NAIL (DRIVE NAIL AT THE TOP OR BOTTOM CENTER OF BLOCK AND POST AFTER BOLT IS INSTALLED).
⑧ ⅝"× ⑥ STEEL THREADED ROD AND TWO (2) HEX HEAD NUTS OR ⅝"× ⑥ BUTTON OR HEX HEAD BOLT AND HEX HEAD NUT.
⑨ ⅝"×8" BUTTON HEAD BOLT, HEX HEAD RECESS NUT AND ONE ⅝" ROUND WASHER (TYP.). BOLT SHALL HAVE A MINIMUM THREAD LENGTH OF 2".

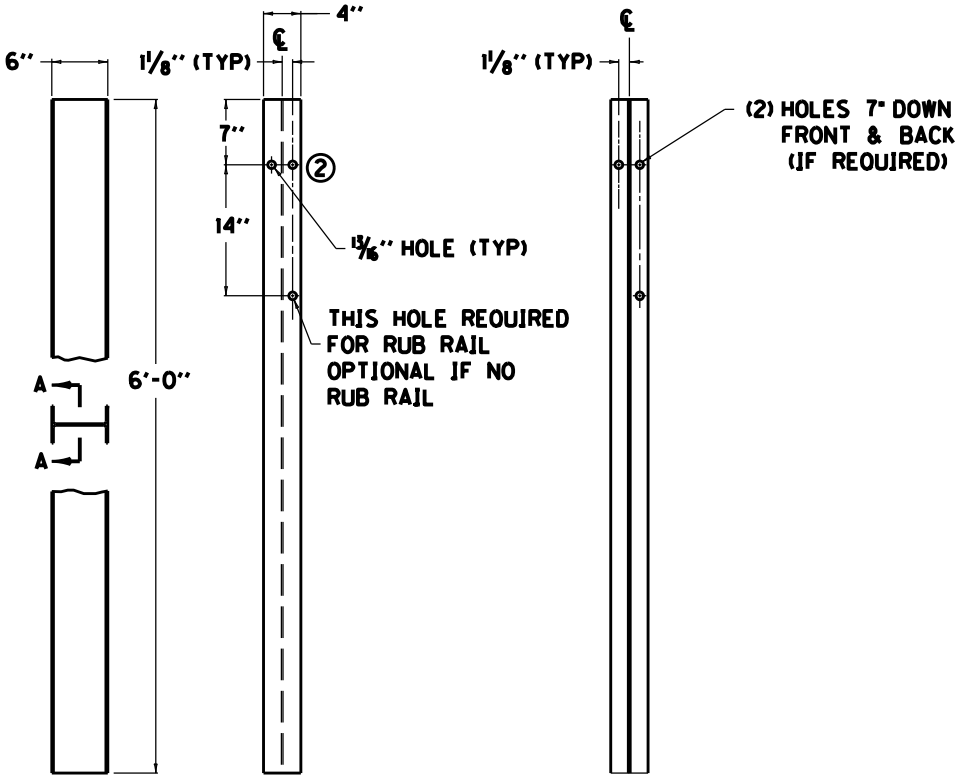
▭ REQUIRED FOR DOUBLE RAIL

10. BOTH 12'-6" AND 25' LENGTHS OF "W" BEAM GUARDRAIL SECTIONS WILL BE PERMITTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R20

STEEL BEAM GUARDRAIL ("W' BEAM)

SEPIA 027



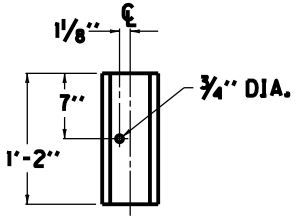
~ W6 X 9.0 STEEL POST ① ~

~ NOTES ~

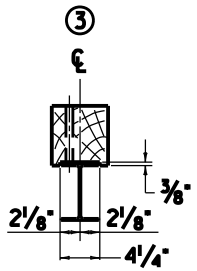
① W6 X 8.5 IS AN ACCEPTABLE ALTERNATE.

② THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.

③ TIMBER OR COMPOSITE BLOCKOUTS MAY BE USED WITH STEEL POST.

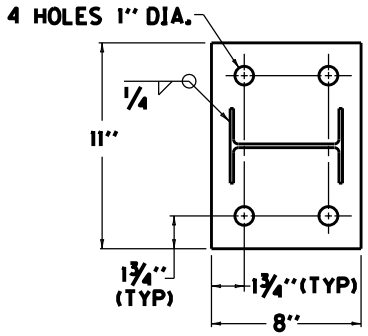


REAR ELEVATION

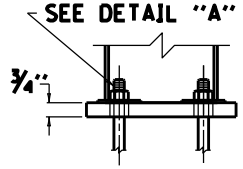


PLAN VIEW

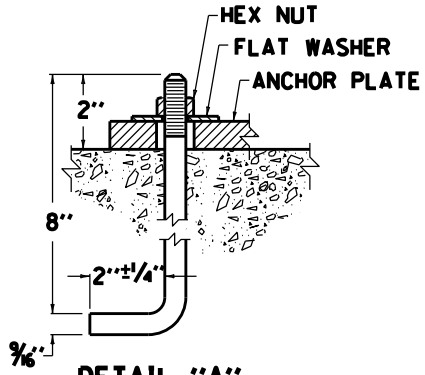
OFFSET BLOCK TYPE 4
6" X 8" (Nominal Size)
(TIMBER OR APPROVED COMPOSITE)
(FOR USE WITH STEEL POST ONLY)



PLAN VIEW



SIDE VIEW
ANCHOR PLATE

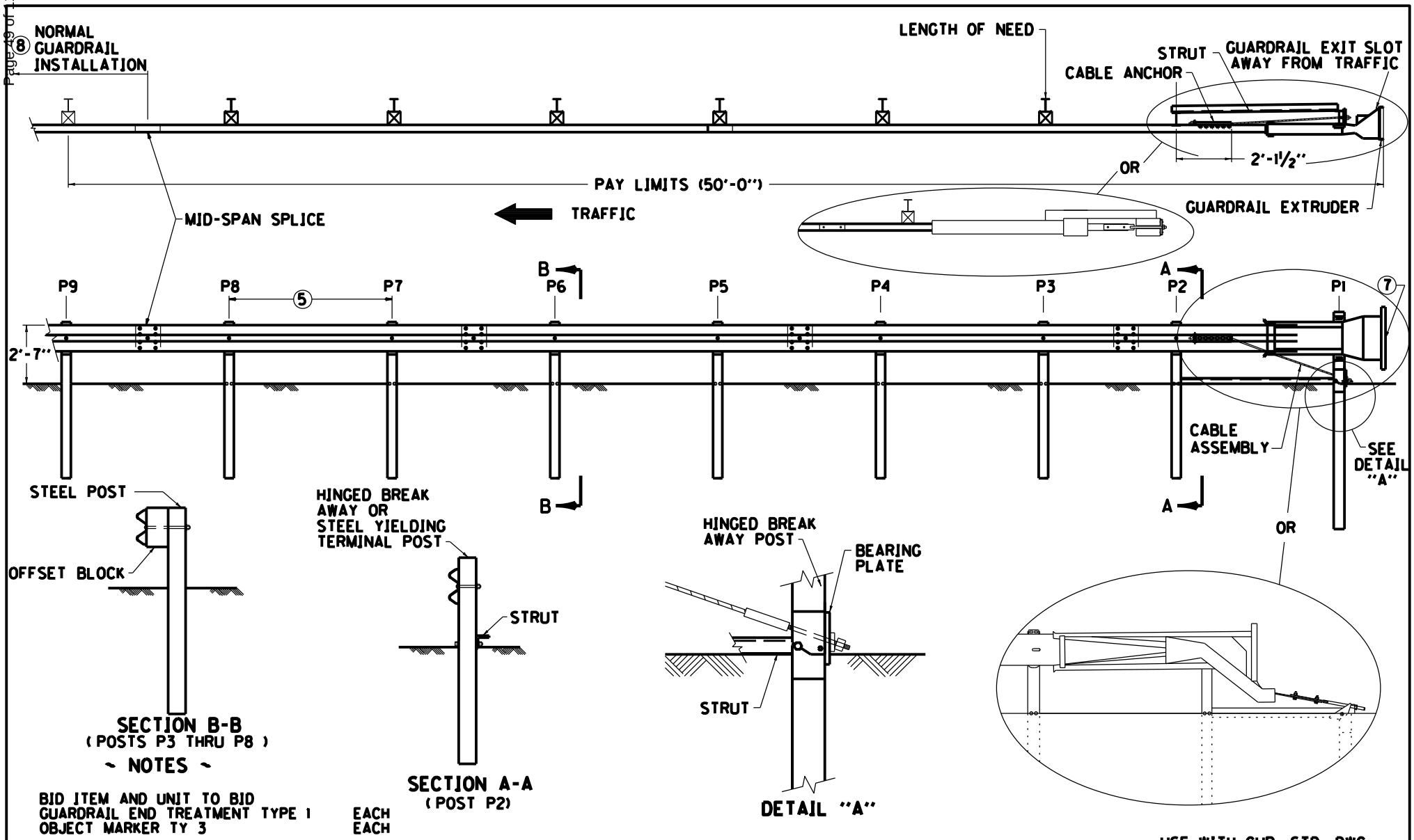


DETAIL "A"

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R21

STEEL GUARDRAIL POSTS

SEPIA 028



SECTION B-B
(POSTS P3 THRU P8)

SECTION A-A
(POST P2)

DETAIL "A"

~ NOTES ~

BID ITEM AND UNIT TO BID

GUARDRAIL END TREATMENT TYPE 1	EACH
OBJECT MARKER TY 3	EACH

1. GUARDRAIL END TREATMENT TYPE 1 SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES POSTS, RAIL ELEMENTS, GUARDRAIL EXTRUDER AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED.
2. PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 1 ARE PATENTED ITEMS; SOFT-STOP MANUACTURED BY TRINITY INDUSTRIES OF DALLAS, TEXAS OR MSKT MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
3. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
4. THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER (SEE SHOP DRAWINGS).
5. POSTS P1 THROUGH P9 ARE SPACED 6'-3" ON CENTER.
6. INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND END TREATMENT.
7. OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS)
8. FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.

USE WITH CUR. STD. DWG. RBI-004

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R22

GUARDRAIL END TREATMENT TYPE 1

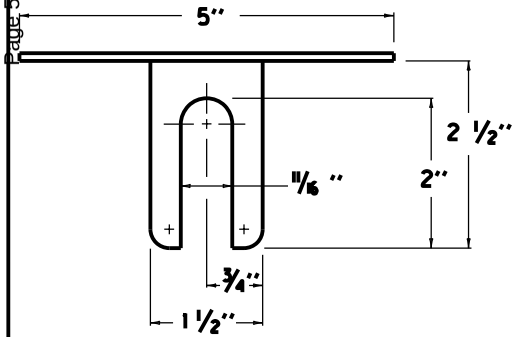
SEPIA 029

~ NOTES ~

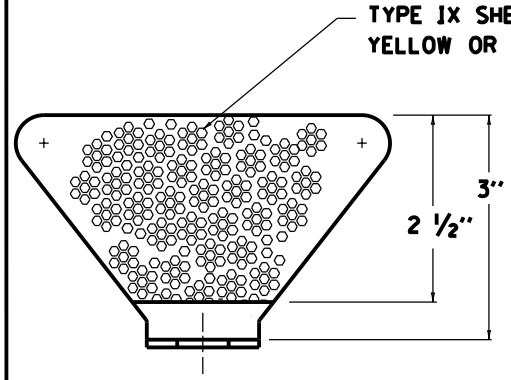
BID ITEMS AND UNIT TO BID

DELINEATOR FOR GUARDRAIL B/W	EACH
DELINEATOR FOR GUARDRAIL M/W	EACH
DELINEATOR FOR GUARDRAIL M/Y	EACH

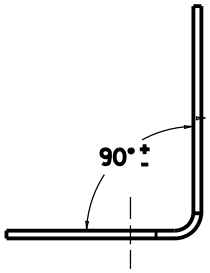
1. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
2. DELINEATOR SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED 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

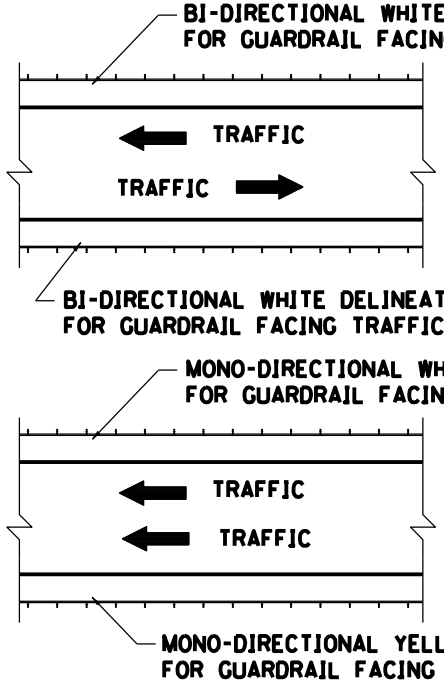


FRONT VIEW



SIDE VIEW

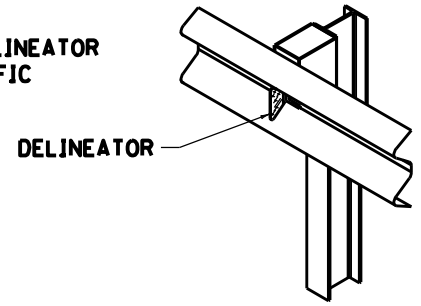
DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.



PLACEMENT OF DELINEATORS FOR GUARDRAIL

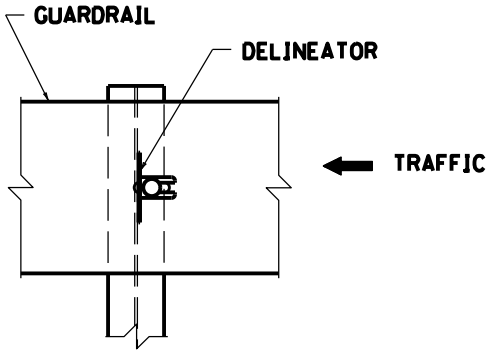
APPROXIMATE DELINEATOR SPACING	
TANGENT	100'
CURVE	50'

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

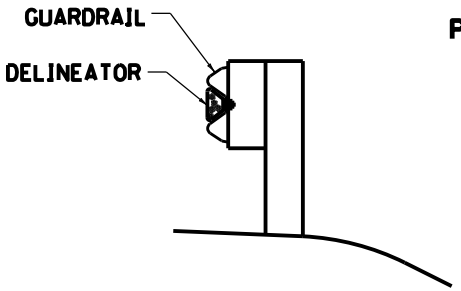


ISOMETRIC VIEW

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



FRONT VIEW

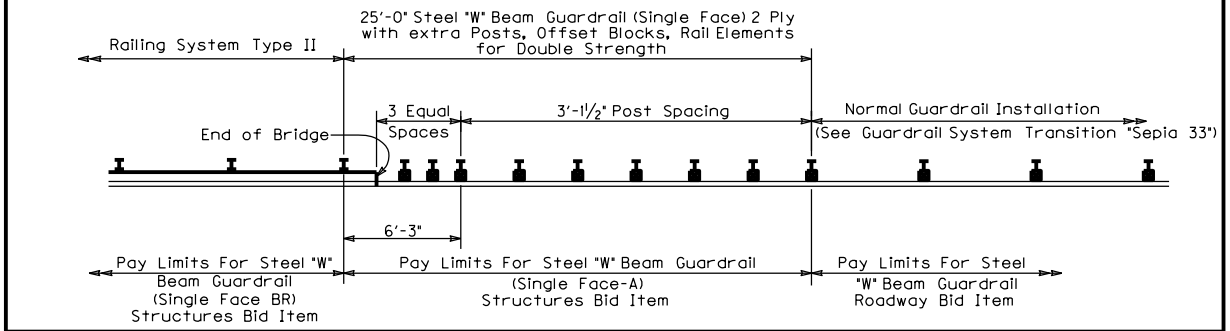


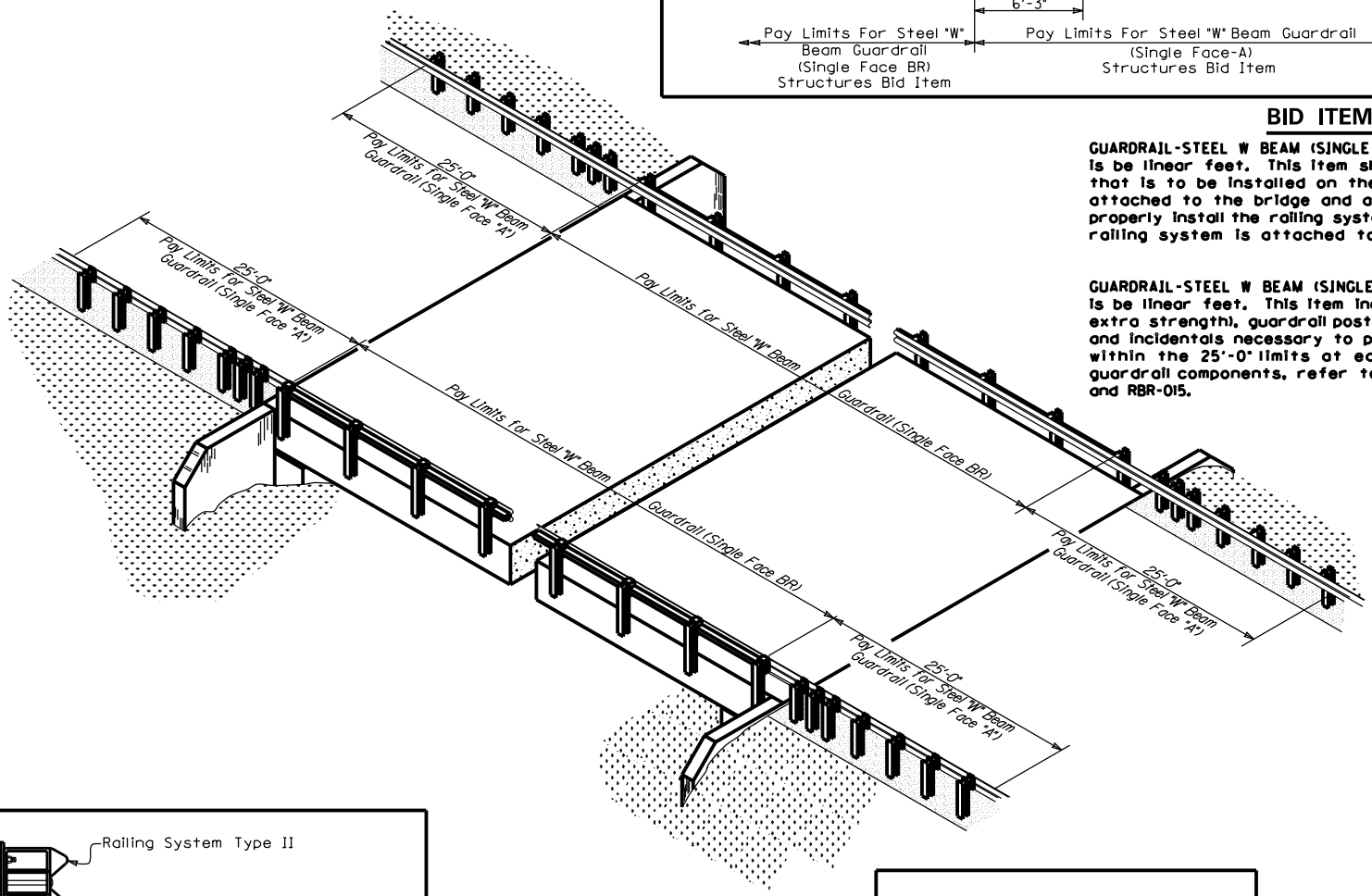
SIDE VIEW

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R23

DELINEATORS FOR GUARDRAIL

SEPIA 032

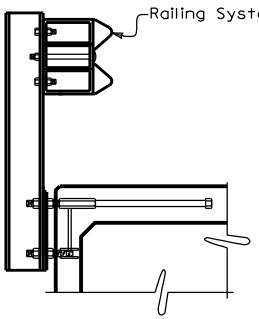




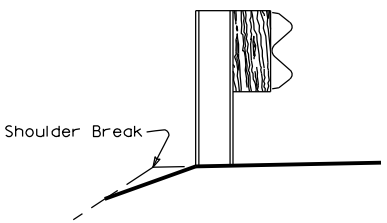
BID ITEM NOTES

GUARDRAIL-STEEL W BEAM (SINGLE FACE BR): The bid unit for this item is be linear feet. This item shall include the Railing System Type II that is to be installed on the bridge between the endmost posts attached to the bridge and all labor and incidentals necessary to properly install the railing system. For non-composite box beams, the railing system is attached to the beam prior to shipment.

GUARDRAIL-STEEL W BEAM (SINGLE FACE A): The bid unit for this item is be linear feet. This item includes the W-Beam guardrail (2 ply for extra strength), guardrail posts, offset blocks, hardware, and labor and incidentals necessary to properly install the approach guardrail within the 25'-0" limits at each corner of the structure. For guardrail components, refer to Standard Drawings RBR-001, RBR-005 and RBR-015.



BRIDGE GUARDRAIL INSTALLATION

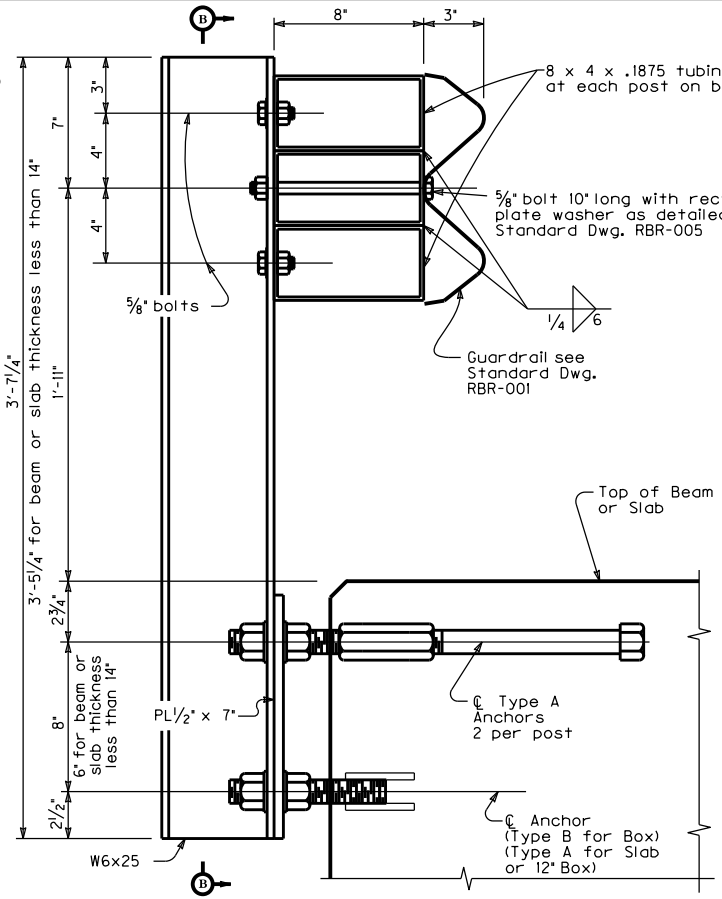


ROADWAY SHOULDER G.R. INSTALLATION

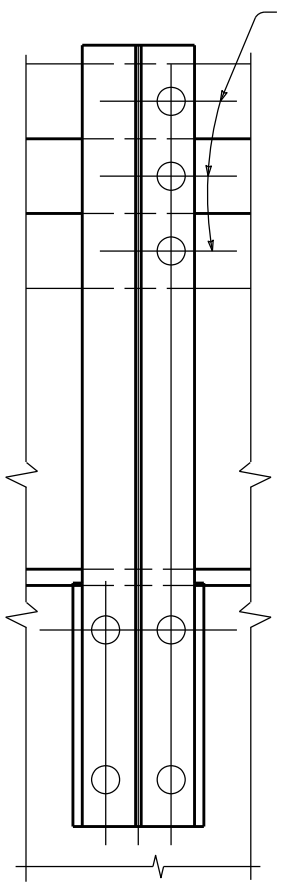
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R24

RAILING SYSTEM TYPE II GUARDRAIL TREATMENT

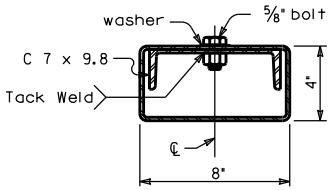
SEPIA 035



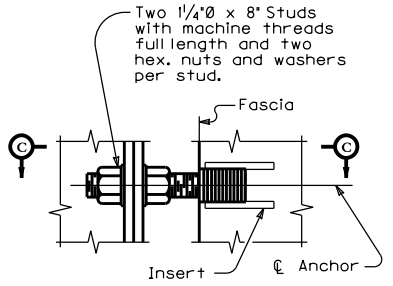
TYPICAL SECTION

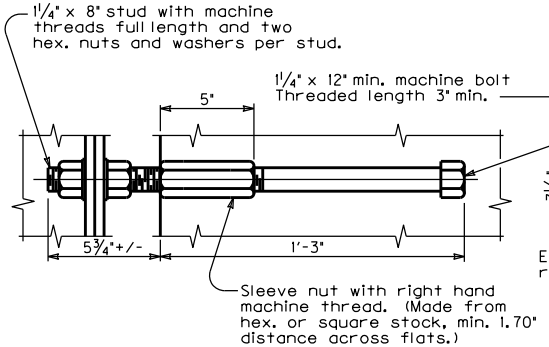


SECTION B–B

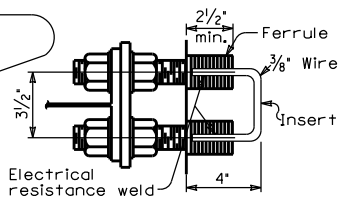


SECTION A–A



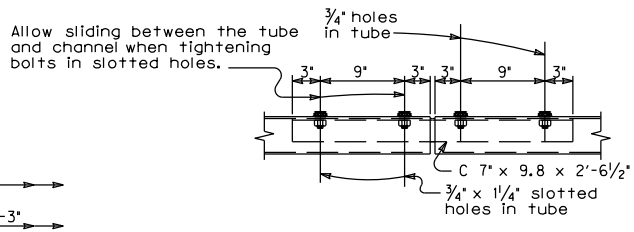


TYPE A ANCHOR DETAIL

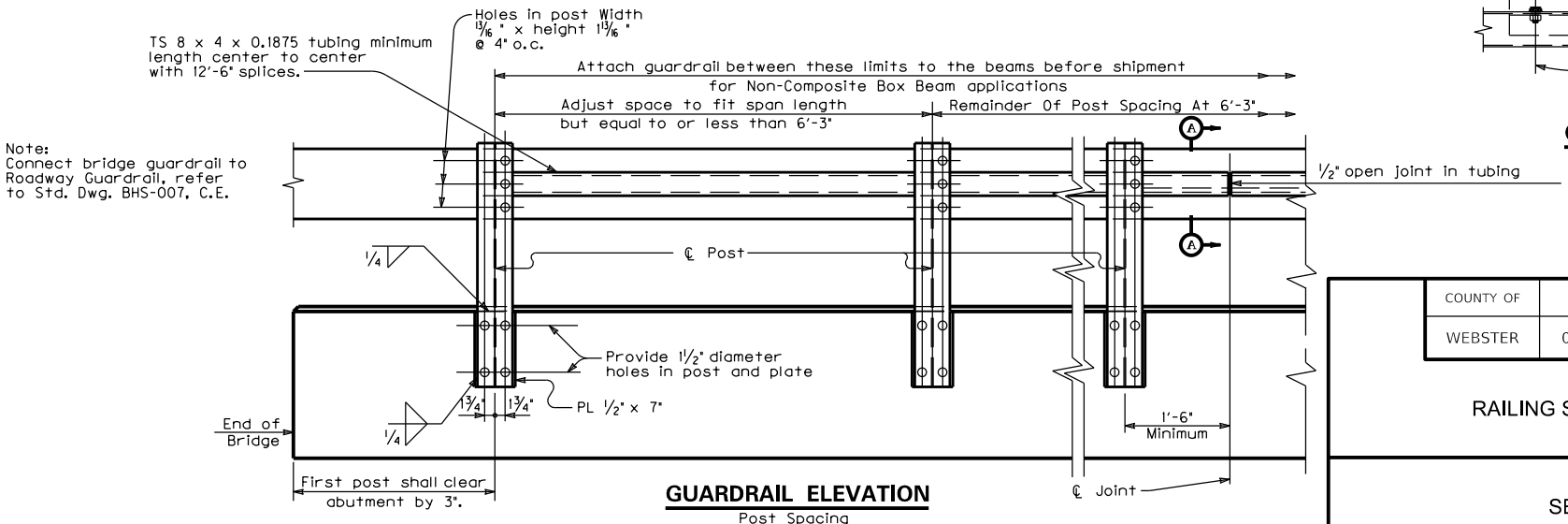


SECTION C-C

TYPE B ANCHOR DETAIL



OPEN JOINT



GUARDRAIL ELEVATION
Post Spacing

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	R25

RAILING SYSTEM TYPE II

SEPIA 051

KY 132 OVER NALL DITCH
WEBSTER COUNTY, KENTUCKY

NOTES

GENERAL NOTES:

1. THIS BRIDGE HAS BEEN DESIGNED FOR GENERAL SITE CONDITIONS. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR THE STRUCTURE'S SUITABILITY TO THE EXISTING SITE CONDITIONS AND FOR THE HYDRAULIC EVALUATION -- INCLUDING SCOUR AND CONFIRMATION OF SOIL CONDITIONS.

2. PRIOR TO CONSTRUCTION, CONTRACTOR MUST VERIFY ALL ELEVATIONS SHOWN THROUGH KYTC.

3. ALTERNATE STRUCTURES MAY BE CONSIDERED, PROVIDED THAT DRAWINGS AND CALCULATIONS ARE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF KENTUCKY,

4. ALTERNATE STRUCTURES MAY BE CONSIDERD, PROVIDED THAT THE ALTERNATE DESIGN DOES NOT REDUCE THE HYDRAULIC OPENING OF THE STRUCTURE AS SHOWN ON THE DRAWINGS. AT A MINIMUM THE ALTERNATE STRUCTURE MUST PROVIDE THE SAME OR LARGER SPAN AND RISE AS THE STRUCTURE SHOWN ON THE DRAWINGS.

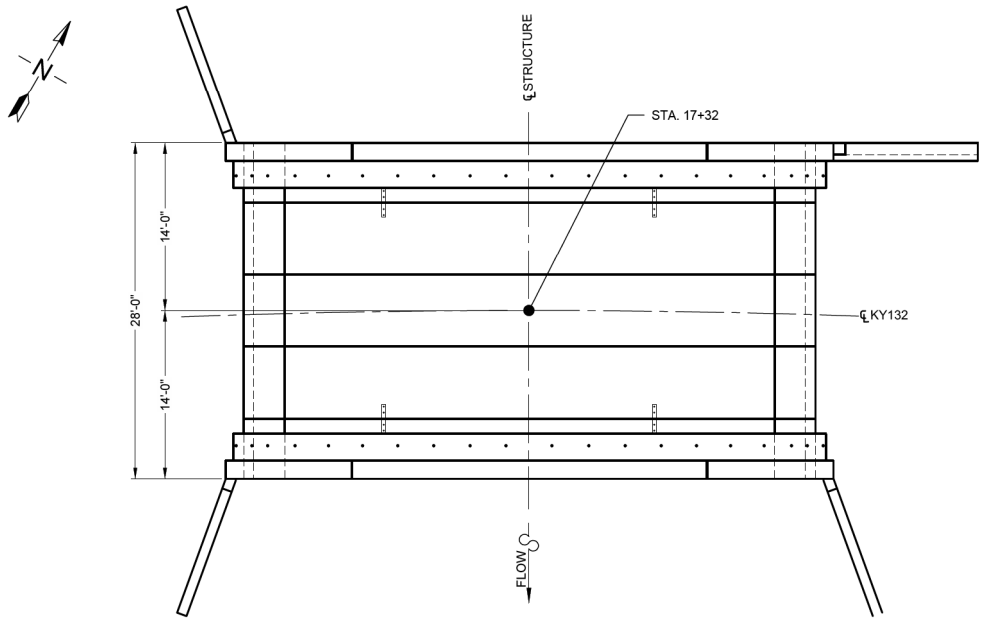
DESIGN DATA

DESIGN LOADING:
BRIDGE UNITS: KYHL93
HEADWALLS: EARTH PRESSURE + LIVE LOAD IMPACT
WINGWALLS: WW1, WW3 & WW4 EARTH PRESSURE + LIVE LOAD SURCHARGE
WW2 EARTH PRESSURE + LIVE LOAD IMPACT
DESIGN FILL HEIGHT: 1'-0" MIN. TO 2'-0" MAX.
FROM TOP OF CROWN TO TOP OF PAVEMENT.
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
NOMINAL PILE RESISTANCE: 775 KIPS *
FACTORED PILE RESISTANCE: 387.5 KIPS *
LATERAL PILE CAPACITY: 20 KIPS

*FOUNDATION EXCAVATION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THIS PROJECT PREPARED BY AMERICAN ENGINEERS, INC: 8/16/2019.

MATERIALS

CONCRETE FOR FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. REINFORCING STEEL FOR FOOTINGS SHALL CONFORM TO ASTM A615 OR A996-GRADE 60. PILES IN ACCORDANCE WITH SECTION 604 OF THE KENTUCKY STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

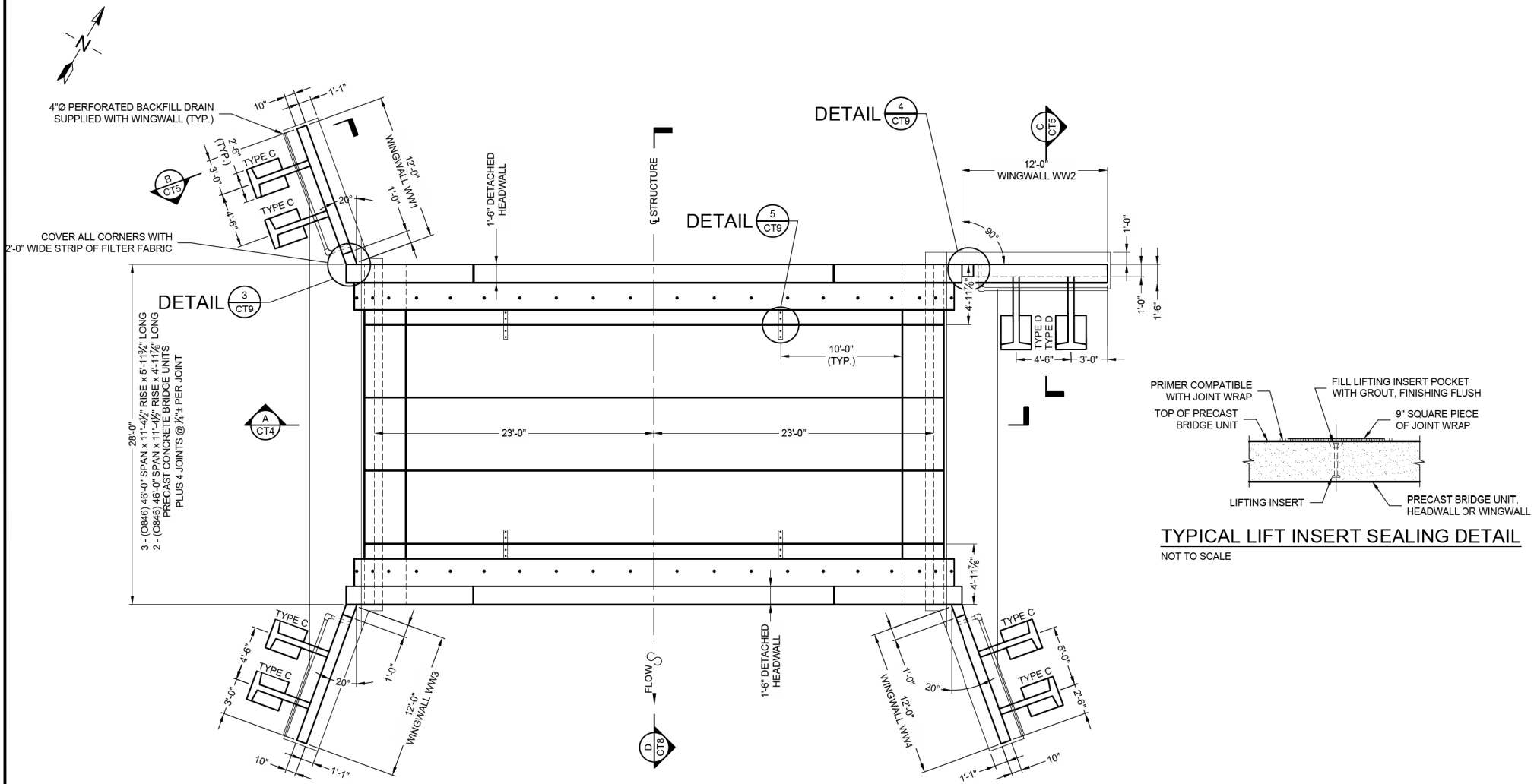


LOCATION PLAN
NOT TO SCALE

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S1

KY 132 CURVE CORRECTION

LOCATION PLAN



BRIDGE PLAN

0 2' 4' 8'

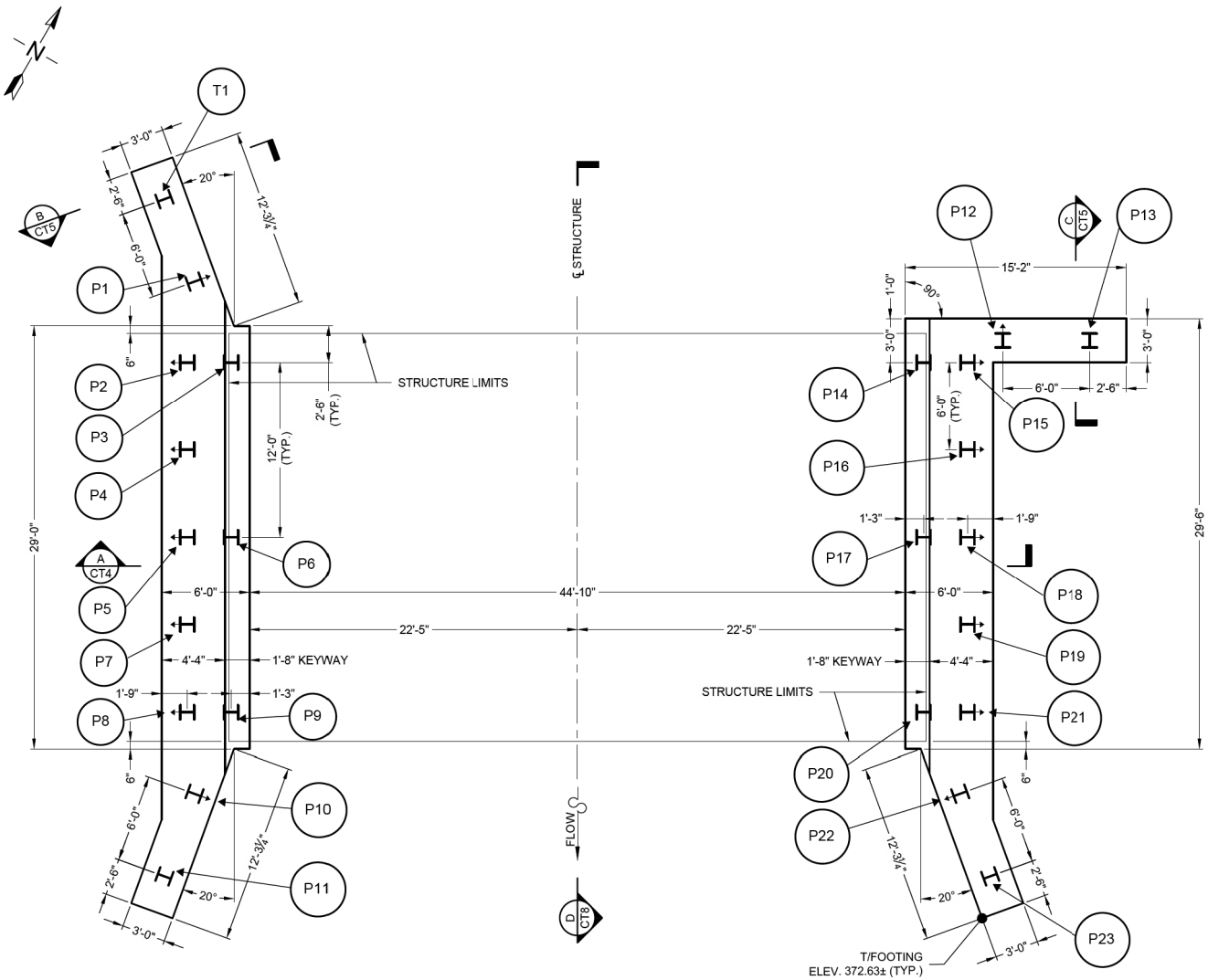
TYPICAL LIFT INSERT SEALING DETAIL

NOT TO SCALE

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S2

KY 132 CURVE CORRECTION

BRIDGE PLAN



FOUNDATION PLAN

0 2' 4' 8'

PLAN NOTES:

1. FOUNDATION EXCAVATIONS SHOULD BE PROPERLY BRACED/SHORED TO PROVIDE ADEQUATE SAFETY TO PEOPLE WORKING IN OR AROUND THE EXCAVATIONS. BRACING SHOULD BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL GUIDELINES.
2. TEMPORARY SHORING, SHEETING, COFFERDAMS, AND/OR DEWATERING METHODS MAY BE REQUIRED TO FACILITATE FOUNDATION CONSTRUCTION. IT SHOULD BE ANTICIPATED THAT GROUNDWATER WILL BE ENCOUNTERED AT FOUNDATION LOCATIONS WITHIN THE FLOODPLAIN.
3. A DIESEL PILE DRIVING HAMMER WITH A RATED ENERGY BETWEEN 47 FOOT-KIPS AND 83 FOOT-KIPS WILL BE REQUIRED TO DRIVE 12X53 STEEL H-PILES TO PRACTICAL REFUSAL WITHOUT ENCOUNTERING EXCESSIVE BLOW COUNTS OR DAMAGING THE PILES. THE CONTRACTOR SHALL SUBMIT THE PROPOSED PILE DRIVING SYSTEM TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO THE INSTALLATION OF THE FIRST PILE. APPROVAL OF THE PILE DRIVING SYSTEM BY THE GEOTECHNICAL ENGINEER WILL BE SUBJECT TO SATISFACTORY FIELD PERFORMANCE OF THE PILE DRIVING PROCEDURES.
4. FOR THIS PROJECT, MINIMUM BLOW REQUIREMENTS MAY BE REACHED AFTER TOTAL PENETRATION BECOMES ½ INCH OR LESS FOR TEN CONSECUTIVE BLOWS, PRACTICAL REFUSAL IS OBTAINED AFTER THE PILE IS STRUCK AN ADDITIONAL TEN BLOWS WITH TOTAL PENETRATION OF ½ INCH OR LESS. ADVANCE THE PRODUCTION PILING TO THE DRIVING RESISTANCES SPECIFIED ON CT1 AND TO DEPTHS DETERMINED BY TEST PILE(S). IMMEDIATELY CEASE DRIVING OPERATIONS IF THE PILE VISIBILITY YIELDS OR BECOMES DAMAGED DURING DRIVING.
5. IF HARD DRIVING IS ENCOUNTERED BECAUSE OF DENSE STRATA OR AN OBSTRUCTION, SUCH AS A BOULDER BEFORE THE PILE IS ADVANCED TO THE DEPTH ANTICIPATED, THE GEOTECHNICAL ENGINEER WILL DETERMINE IF MORE BLOWS THAN THE AVERAGE DRIVING RESISTANCE SPECIFIED FOR PRACTICAL REFUSAL IS REQUIRED TO FURTHER ADVANCE THE PILE. DRIVE ADDITIONAL PRODUCTION AND TEST PILES IF DIRECTED BY THE GEOTECHNICAL ENGINEER.
6. THE INSTALLATION OF THE PILE FOUNDATIONS SHOULD CONFORM TO CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND SECTION 604 OF THE CURRENT EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
7. THE KENTUCKY TRANSPORTATION CABINET RECOMMENDS THAT PROTECTIVE PILE POINTS BE USED ON END BEARING PILES TO ALLOW FOR EMBEDMENT INTO THE TOP OF BEDROCK. USE OF REINFORCED PILE POINTS CAPABLE OF PENETRATING BOULDERS AND HARD LAYERS WHICH MAY BE ENCOUNTERED IS RECOMMENDED. INSTALLATION OF PILE POINTS SHOULD BE IN ACCORDANCE WITH SECTION 604 OF THE KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

NOTE:
LAP (3'-0") #6 LONGITUDINAL BARS IN WINGWALL AND BRIDGE FOOTINGS TO MAKE CONTINUOUS

KEY:
- BATTERED 4:1 HP12 x 53 PILE (50 KSI)
- VERTICAL HP12 x 53 PILE (50 KSI)

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S3

KY 132 CURVE CORRECTION

FOUNDATION PLAN

Field Data

For each pile, the Project Engineer shall record the following on this sheet: Pile Length in Place and Point of Pile Elevation as Driven.

Submit this record to:

Kentucky Transportation Cabinet
Director, Division of Structural Design
3rd Floor East
200 Mero Street
Frankfort, KY 40622

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

Use HP 12x53 in accordance with BPS-003, c.e.

Definitions of Terms

PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.

PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished structure.

POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished structure.

DESIGN AXIAL LOAD: Load carried by each pile as estimated from structural design calculations for Factored LRFD Loadings.

CALCULATED FIELD BEARING: Contrary to Section 604.03.07 of the Standard Specifications, in place bearing values are not required for piles bearing on rock when driven to practical refusal.

Driving Criteria

DRIVING CRITERIA: Drive point bearing piles to practical refusal.

PRACTICAL REFUSAL (Case 2): For this project minimum blow requirements are reached after total penetration becomes ½" or less for 10 consecutive blows, practical refusal is obtained after the pile is struck an additional 10 blows with total penetration of ½" or less. Advance the production piling to the driving resistances specifed above and to depths determined by test pile(s) and subsurface data sheet(s). Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.

PILE RECORD FOR POINT BEARING PILES

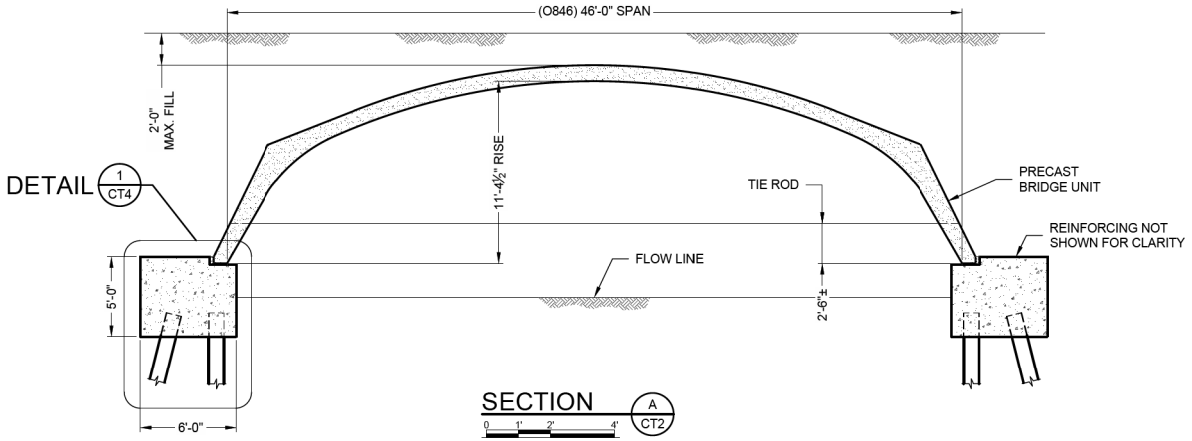
Pile No.	Pile Cut-off Elevation	Pile Length In Place	Point of Pile Elevation As Driven	Design Axial Load
	FEET	FEET	FEET	TONS
T1	369.13			
P1	369.13			
P2	369.13			
P3	369.13			
P4	369.13			
P5	369.13			
P6	369.13			
P7	369.13			
P8	369.13			
P9	369.13			
P10	369.13			
P11	369.13			
P12	369.13			
P13	369.13			
P14	369.13			
P15	369.13			
P16	369.13			
P17	369.13			
P18	369.13			
P19	369.13			
P20	369.13			
P21	369.13			
P22	369.13			
P23	369.13			

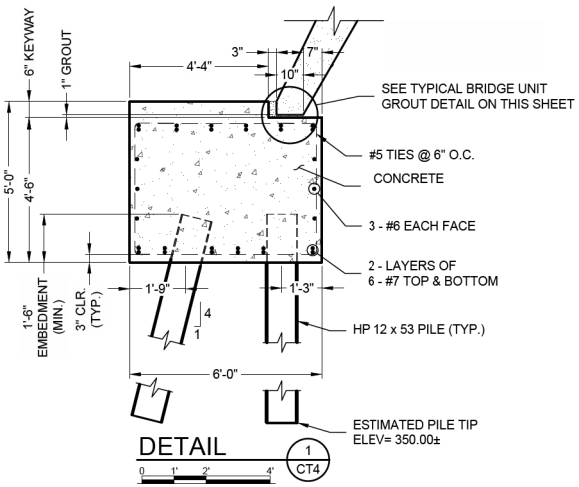
* DESIGN AXIAL LOAD TO BE CALCULATED BY VENDOR.

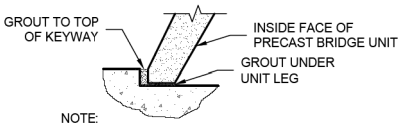
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S4

KY 132 CURVE CORRECTION

PILE RECORDS







NOTE:
FILL ENTIRE KEYWAY INCLUDING NOMINAL 1" VOID BETWEEN BOTTOM OF KEYWAY AND BOTTOM OF PRECAST BRIDGE UNIT LEG WITH GROUT.

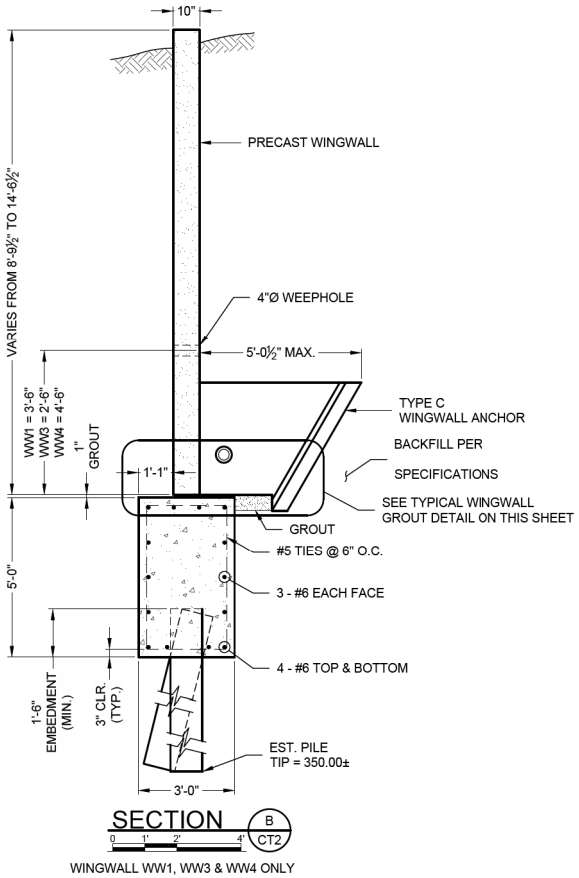
TYPICAL BRIDGE UNIT GROUT DETAIL

NOT TO SCALE

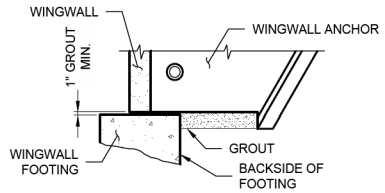
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S5

KY 132 CURVE CORRECTION

DETAILS



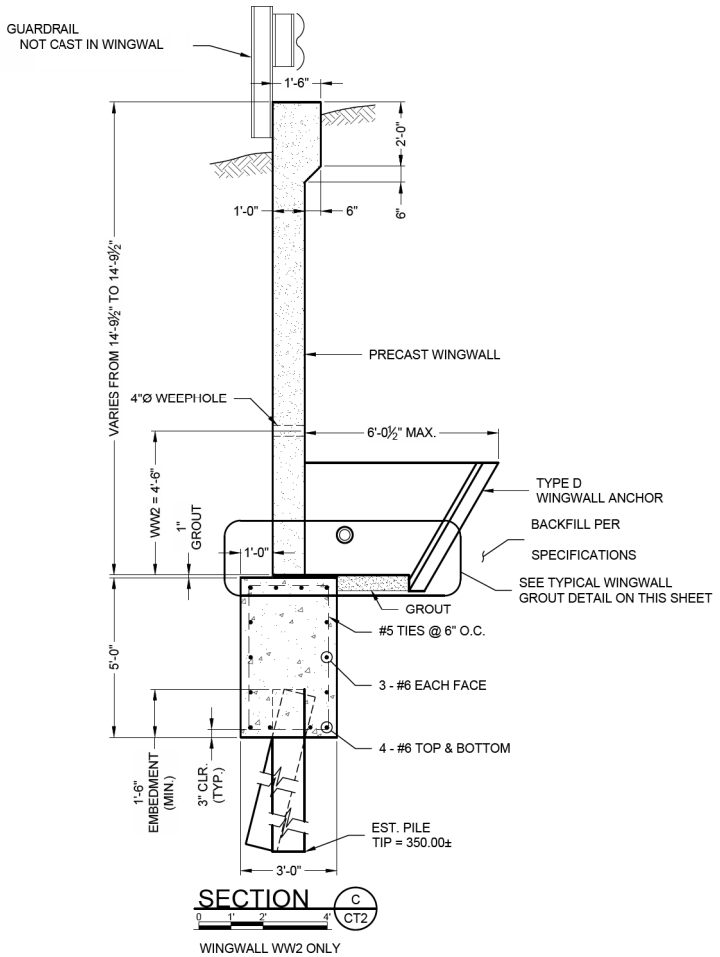
WINGWALL WW1, WW3 & WW4 ONLY



NOTES:
- MINIMUM 1" GROUT UNDER WINGWALL LEG & ANCHOR STEM.
- AREA BETWEEN WINGWALL FOOTING AND WINGWALL ANCHOR SHALL BE GROUTED SOLID BEFORE BACKFILL.
- FORM BACKSIDE OF FOOTING TO DIMENSIONS SHOWN ON FOUNDATION PLAN.

TYPICAL WINGWALL GROUT DETAIL

NOT TO SCALE

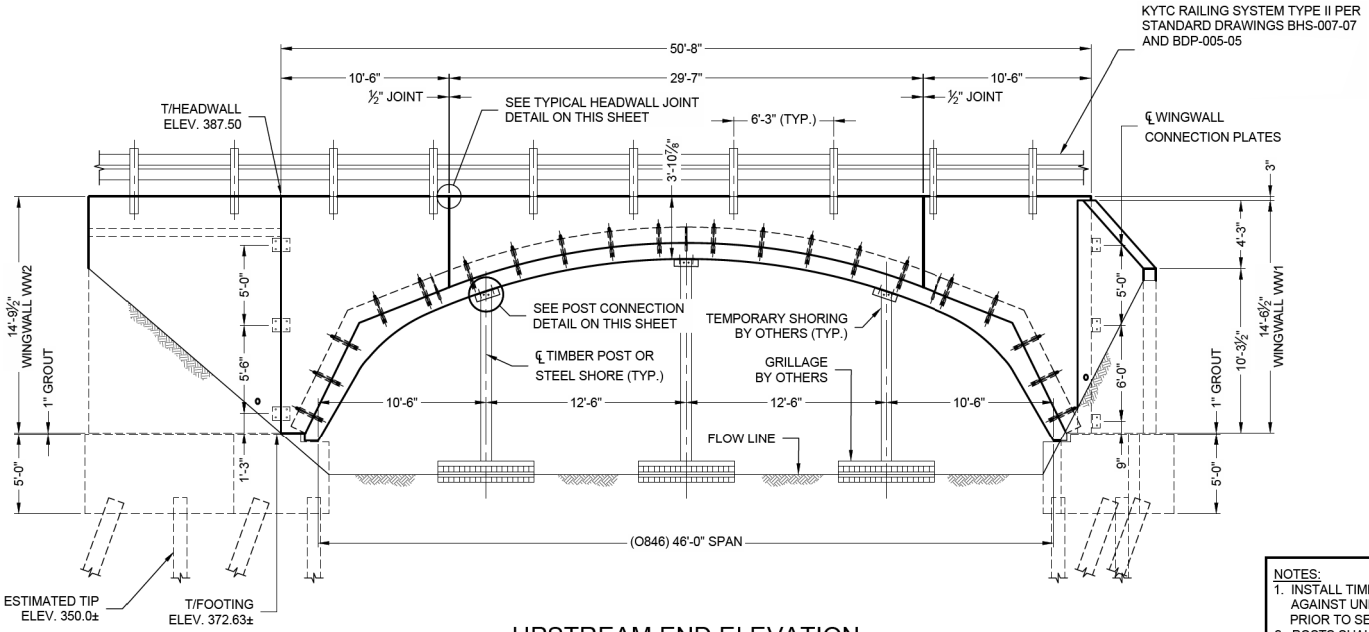


WINGWALL WW2 ONLY

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S6

KY 132 CURVE CORRECTION

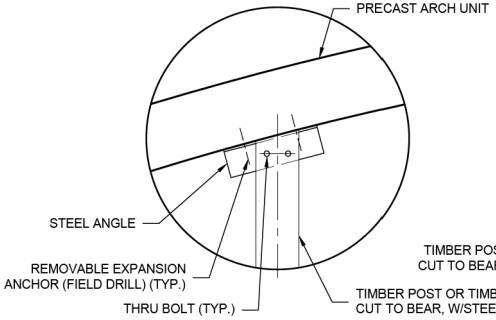
DETAILS



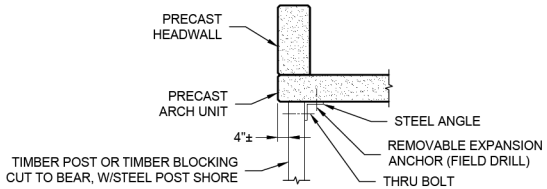
UPSTREAM END ELEVATION

0 2' 4' 8'

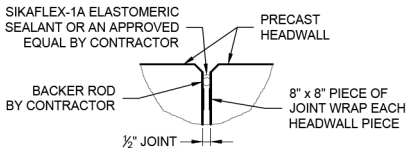
NOTES:
1. INSTALL TIMBER OR STEEL POSTS TIGHT AGAINST UNDERSIDE OF PRECAST ARCH UNIT PRIOR TO SETTING PRECAST HEADWALL UNITS.
2. POSTS SHALL REMAIN IN PLACE UNTIL BACKFILL IS AT LEAST 1'-0" FROM TOP OF STRUCTURE.



POST CONNECTION DETAIL



HEADWALL SECTION



TYPICAL HEADWALL JOINT DETAIL

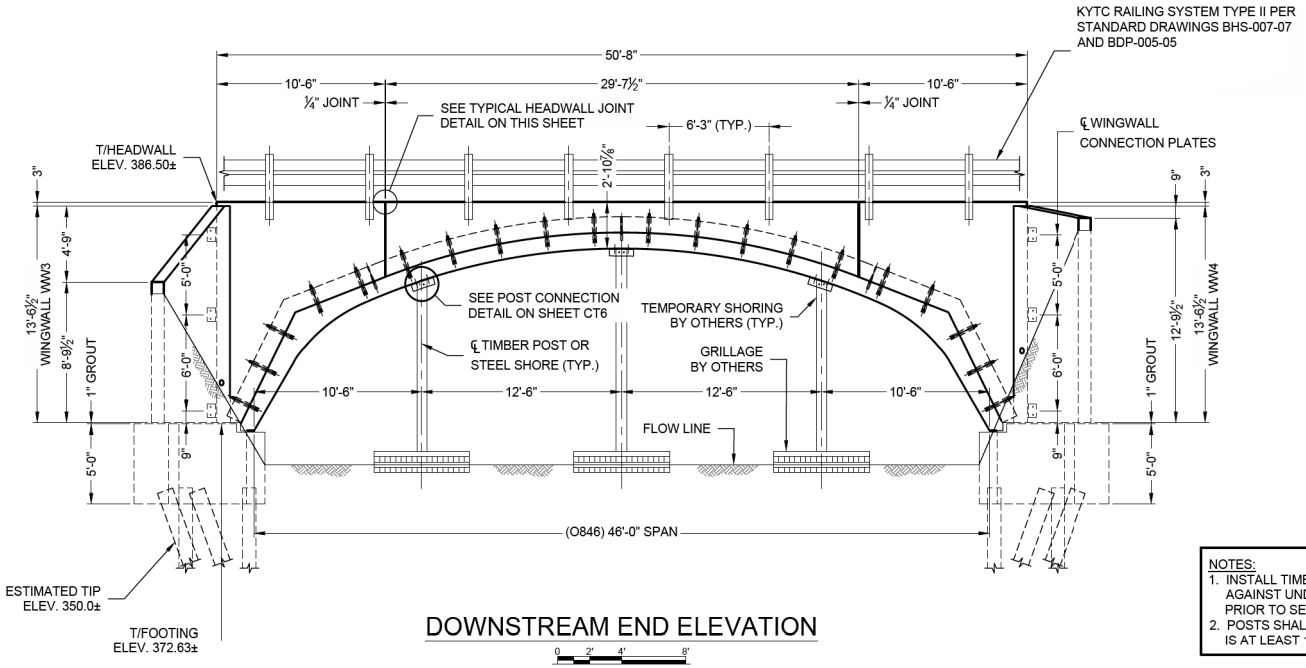
NOT TO SCALE

TEMPORARY SHORING DETAIL & SECTION

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S7

KY 132 CURVE CORRECTION

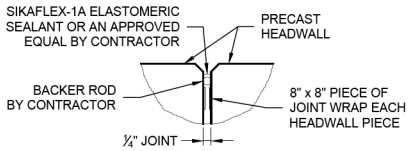
DETAILS



DOWNSTREAM END ELEVATION

0 2' 4' 8'

NOTES:
1. INSTALL TIMBER OR STEEL POSTS TIGHT AGAINST UNDERSIDE OF PRECAST ARCH UNIT PRIOR TO SETTING PRECAST HEADWALL UNITS.
2. POSTS SHALL REMAIN IN PLACE UNTIL BACKFILL IS AT LEAST 1'-0" FROM TOP OF STRUCTURE.



TYPICAL HEADWALL JOINT DETAIL

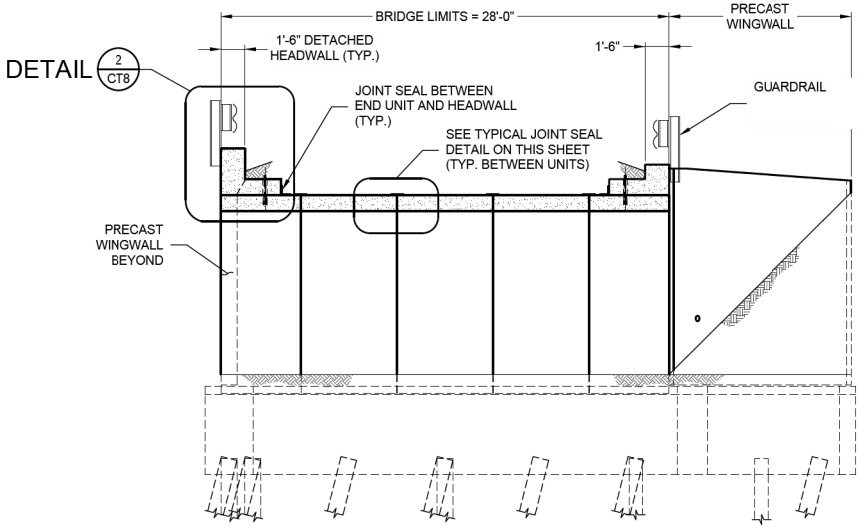
NOT TO SCALE

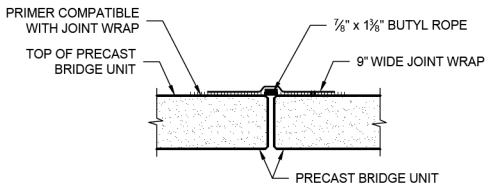
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S8

KY 132 CURVE CORRECTION

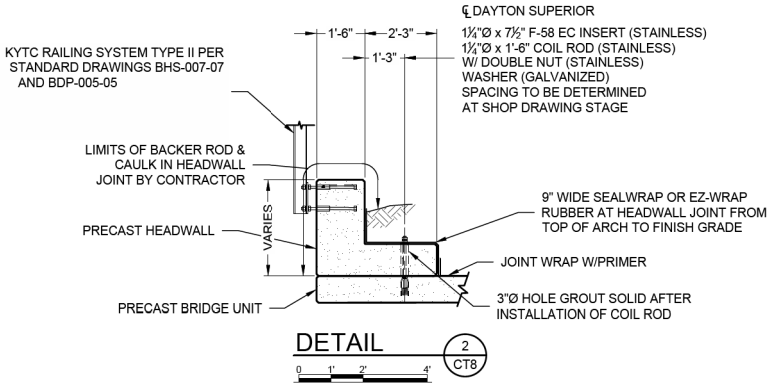
DETAILS

RAIL INSERTS SHALL BE PLACED IN THE FORMS AT THE PRE-CASTER'S PLANT.





TYPICAL JOINT SEAL DETAIL
NOT TO SCALE



COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S9

KY 132 CURVE CORRECTION

DETAILS

August 16, 2019

Mr. Rodney Little, PE
Bridging Kentucky Area Team Leader
QK4
1046 E. Chestnut Street
Louisville, KY 40204

RE: Geotechnical Exploration
Webster County, Kentucky
KY-132 over Nall Ditch
Bridge No. 117B00064N

Dear Mr. Little:

1 INTRODUCTION

The abbreviated geotechnical engineering report for this structure has been completed. The project is a part of the Bridging Kentucky Program. The project is to reconstruct the existing bridge of KY-132 over Nall Ditch in Webster County, Kentucky.

2 GEOLOGY

The structure is in the Bordley Geologic Quadrangle (GQ1275). The geologic mapping indicates the soils at this site consists of Quaternary-aged lacustrine and fluvial deposits. The deposits consist primarily of silts and clays. The deposits overlie the Sturgis Formation. This formation is comprised of siltstone, sandstone, shale and limestone. We encountered shale described as dark gray, silty to argillaceous, soft to moderately hard and thin to thick bedded.

3 DRILLING AND SAMPLING

One soil test boring was completed at this location. Soil samples were obtained to a depth of approximately 34.8 feet. Bedrock was encountered at a depth of 34.8 feet.

The boring "as drilled" latitudes and longitudes in decimal degrees were surveyed as a part of the Bridging Kentucky Program and are available in Table 1. Table 1 provides a summary of the locations, elevations, and depths of the borings drilled for the proposed bridge.

Table 1: Bridge over Nall Ditch – Summary of Borings

Hole No.	Latitude	Longitude	Surface Elevation (ft.) MSL	Top of Rock/Refusal		Begin Core		Bottom of Hole	
				Depth (ft.)	Elevation (ft.) MSL	Depth (ft.)	Elevation (ft.) MSL	Depth (ft.)	Elevation (ft.) MSL
B-1	37.523413	-87.762436	384.8	34.8	350.0	34.8	350.0	44.6	340.2

4 LABORATORY TESTING

The laboratory testing indicates that the soil sampled at this location was primarily clay. Corresponding USCS classifications were CL and CL-ML.

5 ENGINEERING ANALYSIS AND FOUNDATION RECOMMENDATIONS

5.1 **End Bents** – Use end bearing steel H-Piles with reinforced pile points driven to bedrock for the end bents. The approximate point of pile elevation is near 314 feet. We recommend a resistance factor (ϕc) of 0.5 to determine the maximum nominal resistance of the piles.

5.2 **Settlement at Abutments**– A settlement analysis was not required due to the relatively small amount of new fill that will be added.

5.3 **Wave Equation Analysis**– Drivability analyses were performed for the piles at this location assuming 16-inch closed end steel pipe piles with a wall thickness of 0.5 inches and a steel yield stress of 45 ksi. These analyses indicate that a single acting diesel hammer with rated energies of 47 foot-kips to 83 foot-kips is recommended to adequately drive the piles without encountering excessive blow counts or overstressing the piles. The use of hammers other than single acting diesel may require different energy ranges.

Drivability analyses were performed assuming continuous driving. If interruptions in driving individual piles should occur, difficulties in continuing the installation process will likely occur due to pile "set" characteristics.

5.4 **Embankment Stability**– Due to the minimal amount of new fill, no embankment stability analyses were deemed necessary.

6 PLAN NOTES

Add the following plan notes as necessary at the appropriate locations in the plans.

6.1 Foundation excavations should be properly braced/shored to provide adequate safety to people working in or around the excavations. Bracing should be performed in accordance with applicable federal, state and local guidelines.

6.2 Temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate foundation construction. It should be anticipated that groundwater will be encountered at foundation locations within the floodplain.

6.3 A diesel pile driving hammer with a rated energy between 47 foot-kips and 83 foot-kips will be required to drive 12x53 steel H-piles to practical refusal without encountering excessive blow counts or damaging the piles. The Contractor shall submit the proposed pile driving system to the Engineer for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S10

KY 132 CURVE CORRECTION

GEOTECH

6.4 For this project, minimum blow requirements may be reached after total penetration becomes ½ inch or less for ten consecutive blows, practical refusal is obtained after the pile is struck an additional ten blows with total penetration of ½ inch or less. Advance the production piling to the driving resistances specified above and to depths determined by test pile(s). Immediately cease driving operations if the pile visibility yields or becomes damaged during driving.

6.5 If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.

6.6 The installation of the pile foundations should conform to current AASHTO LRFD Bridge Design Specifications, and Section 604 of the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.

6.7 The Kentucky Transportation Cabinet recommends that protective pile points be used on end bearing piles to allow for embedment into the top of bedrock. Use of reinforced pile points capable of penetrating boulders and hard layers which may be encountered is recommended. Installation of pile points should be in accordance with Section 604 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

The designer should feel free to contact AEI at 270-651-7220 for further recommendations or if any questions arise pertaining to this project.

Sincerely,

AMERICAN ENGINEERS, INC.

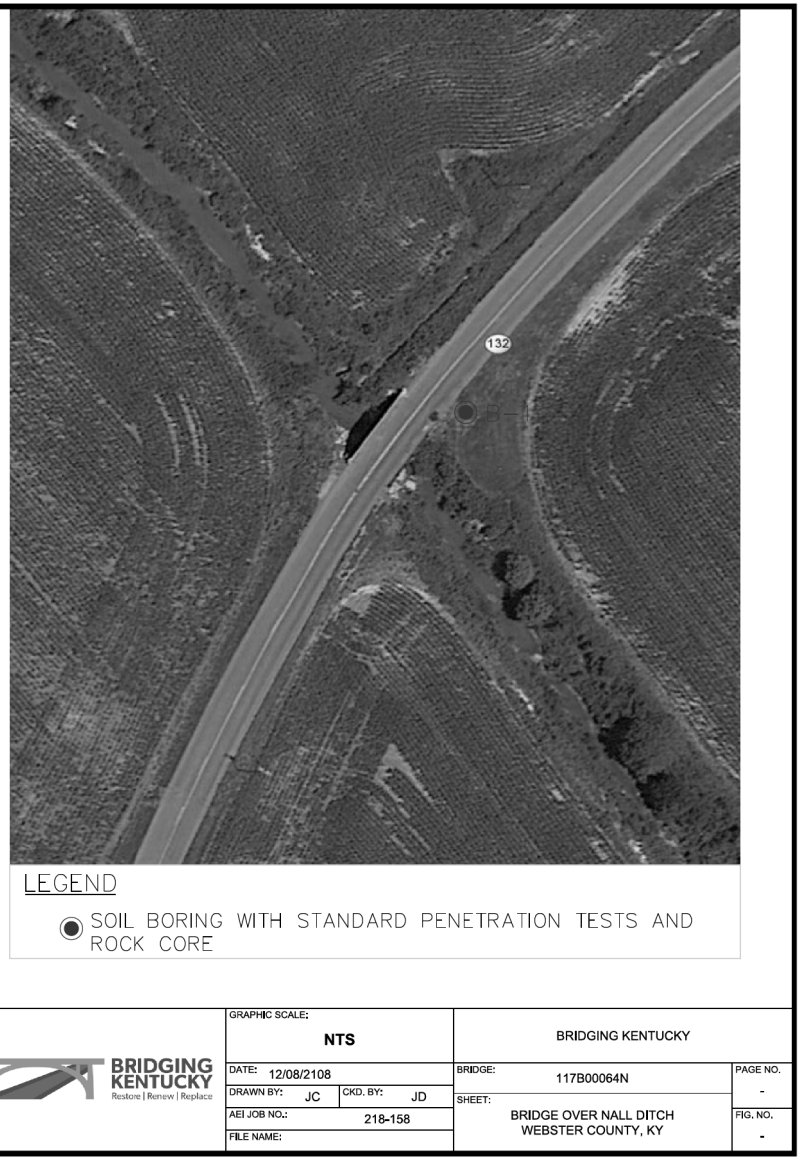
Jackson Daugherty, PE, PMP

Geotechnical Engineer

Dennis Mitchell, PE, PMP
Director of Federal Geotechnical Services

Attachments:

- Boring Layout
- Typed Boring Logs
- Laboratory Data



PLOT DATE: 12/7/2018 12:25:53 PM USER: JACKSON DAUGHERTY
T:\GEOTECH SUPPORT\KYTC\218-158 BRIDGING KY PROGRAM\GEOTECH\INITIAL BRIDGES\REPORTS\WEBSTER COUNTY 117B00064N\REPORT\SUPPORT INFO\WEBSTER 117B00064N LAYOUT.DGN

BRIDGING KENTUCKY
Restore | Renew | Replace

GRAPHIC SCALE: NTS		BRIDGING KENTUCKY	
DATE: 12/08/2108		BRIDGE: 117B00064N	PAGE NO. -
DRAWN BY: JC	CKD. BY: JD	SHEET: BRIDGE OVER NALL DITCH WEBSTER COUNTY, KY	FIG. NO. -
AEI JOB NO.: 218-158			
FILE NAME:			

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S11

KY 132 CURVE CORRECTION

GEOTECH

Drilling Firm: American Engineers (Glasgow)
For: Division of Structural Design
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 8/16/19

Project ID: ***117B00064N***	***Webster - KY-132***	Project Type: ***Structure County Bridge***
Item Number: ***2-10019***	***Nall Ditch***	Project Manager: ***Dennis Mitchell***

Hole Number ***B-1***	Immediate Water Depth ***18.0 (11/20/18)***	Start Date ***11/20/2018***	Hole Type ***core and sample***
Surface Elevation ***384.8'***	Static Water Depth ***NA***	End Date ***11/20/2018***	Rig_Number ***CME 45***
Total Depth ***44.6'***	Driller ***Thompson, Adam***	Latitude(83) ***37.523413***	
Location ***+ 'Lt.***		Longitude(83) ***-87.762436***	

Lithology Elevation	Lithology Depth	Description (Overburden / Rock Core)	Sample No. (Std/Ky RQD)	Depth (ft) Run (ft)	Rec. (ft) Rec (ft)	SPT Blows Rec (%)	Sample Type SDI (JS)	Remarks
384.6	0.2	Topsoil.						
			1	2.0-3.5	1.0	0-1-2	SPT	
5			2	4.0-5.5	0.3	0-0-1	SPT	5
10		Brown to gray, wet, silty lean clay with coarse sand (soft to medium stiff).	3	9.0-10.5	1.5	3-4-4	SPT	10
15			4	14.0-15.5	1.5	1-1-3	SPT	15
365.8	19.0							
20			5	19.0-20.5	1.5	1-3-4	SPT	20
25		Brown to gray, very moist, lean clay (medium stiff).	6	24.0-25.5	1.5	3-4-5	SPT	25
355.8	29.0							
30			7	29.0-30.3	1.3	8-26-50/0.30'	SPT	30
		Dark gray, gravelly lean clay (medium stiff).						
35 350.0	34.8	(Begin Core)	8	34.0-34.8	0.8	30-50/0.30'	SPT	35
			93 / 0	4.6	4.6	100		
40		Dark gray shale, (silty to argillaceous, dark gray, soft to moderately hard, thin to thick bedded).						39.4 40
			90 / 0	5.2	5.2	100		
45 340.2	44.6							44.6 45
50		(Bottom of Hole 44.6')						50

Project ID: 117B00064N
Location: Webster
Item No: 2-10019

Hole	Sample Type	Depth	Liquid Limit	Plastic Limit	PI	D50	%<#200 Sieve	AASHTO	Classif-ication	Water Content (%)
B-1	SPT	2								25.2
B-1	SPT	4								20.2
B-1	SPT	9	23	19	4	0.011	86	A-4 (2)	CL-ML	20.7
B-1	SPT	14								23.4
B-1	SPT	19	35	13	22	0.008	86	A-6 (17)	CL	
B-1	SPT	24								
B-1	SPT	29								
B-1	SPT									

65 Aberdeen Drive
Glasgow, KY 42141
(270) 651-7220
www.aei.cc

AEI AMERICAN ENGINEERS, INC. PROFESSIONAL ENGINEERING

PAGE No. 1 OF 1

PROJECT No. 117B00064N COUNTY Webster CALC. BY JD DATE 8/14

STRUCTURE over Nall Ditch ROAD KY-132 CHK'D BY DM DATE 8/14

Depth 0 - 18' Elevation 385' - 366'

γ = 120 pcf

S_u = 500 psf

ε_{50} = 0.020 from Peck et al. 1974

Depth 18' - 35' Elevation 366' - 350'

$\bar{\gamma}$ = 57.6 pcf

S_u = 1,000 psf

ε_{50} = 0.010

Total Jars: 0
Total SPT: 0
Total ST: 0
Total Cut Bags: 0
Total Fill Bags: 0

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	S12

KY 132 CURVE CORRECTION

GEOTECH

Station	Area Sq Ft					DISTANCE	Volume Cy				
	Com (Cut)	Emb (Fill)	Emb Bench	Level Wedging	Milling		Com (Cut)	Emb (Fill)	Emb Bench	Level Wedging	Milling
1425	0.84	0.34	6.04	0	0.6						
						25	3	3	11	1	1
1450	2.09	3.4	6.05	0.58	0.88						
						50	2	10	40	7	3
1500	0.1	7.3	15.38	3.22	0.79						
						50	1	0	56	16	5
1550	0.48	11.67	14.62	5.16	1.8						
						50	2	23	50	19	8
1600	1.17	13.56	12.35	5.25	2.65						
						50	2	30	78	26	5
1650	0.82	19.33	29.64	8.57	0.1						
						50	1	47	138	35	1
1700	0	31.67	44.93	10.31	0.27						
						50	0	29	83	36	1
1750	0	0	0.00	9.29	0						
						50	0	0	114	41	0
1800	0	10.49	61.62	13.01	0						
						50	0	49	195	49	0
1850	0	42.7	43.74	13.58	0						
						50	0	62	148	38	0
1900	0	24.72	36.02	7.1	0						
						50	0	54	131	24	0
1950	0	33.4	34.60	5.8	0						
						50	0	63	128	29	0
2000	0	34.75	34.51	9.72	0						
						50	0	55	133	33	0
2050	0	24.54	37.57	7.86	0						
						50	0	26	77	24	0
2100	0	3.2	3.82	5.36	0						
						50	2	13	35	18	3
2150	1.74	10.7	15.34	4.11	1.74						
						50	2	23	49	17	7
2200	0.31	14.4	11.12	5.01	2.3						
						50	1	23	30	20	10
2250	0.58	10.65	4.93	5.89	2.99						
						50	1	18	15	21	10
2300	0.56	8.56	3.00	5.51	2.55						
						50	1	18	14	24	8
2350	0.4	10.75	4.63	7.43	1.84						
						50	1	19	17	25	9
2400	0.98	9.4	4.50	6.07	3.01						
						50	2	16	16	20	10
2450	0.65	7.7	4.35	4.61	2.62						
						50	1	13	15	15	9
2500	0.5	5.9	3.90	3.58	2.46						
						50	1	9	12	12	8
2550	0.22	3.72	2.50	3.02	1.94						
						50	0	7	13	10	5
2600	0.25	3.85	4.78	2.13	0.83						
						50	0	6	18	5	4
2650	0.13	3.1	4.70	0.35	1.24						
						25	0	2	4	0	3
2675	0.3	0.2	0.00	0	2.29						
							CY	CY	CY	CY	CY
						KY 132 Total CY	21	619	1620	564	112
						KY 857 Total CY	0	19	0	125	4
						Project Total CY	21	638	1620	689	116
										Tons	Tons
						KY 132 Total Tons				1117	221
						KY 857 Total Tons				248	8
						Project Total Tons				1365	229

Station	Area Sq Ft					DISTANCE	Volume Cy				
	Com (Cut)	Emb (Fill)	Emb Bench	Level Wedging	Milling		Com (Cut)	Emb (Fill)	Emb Bench	Level Wedging	Milling
4915	0	0	0	0	2.28						
						45	0	4	0	23	4
4950	0	4.74	0	14.05	0						
						39	0	15	0	102	0
4989	0	16.16		56.53	0						
						KY 857 Total	0	19	0	125	4

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X1

KY 132 CURVE CORRECTION

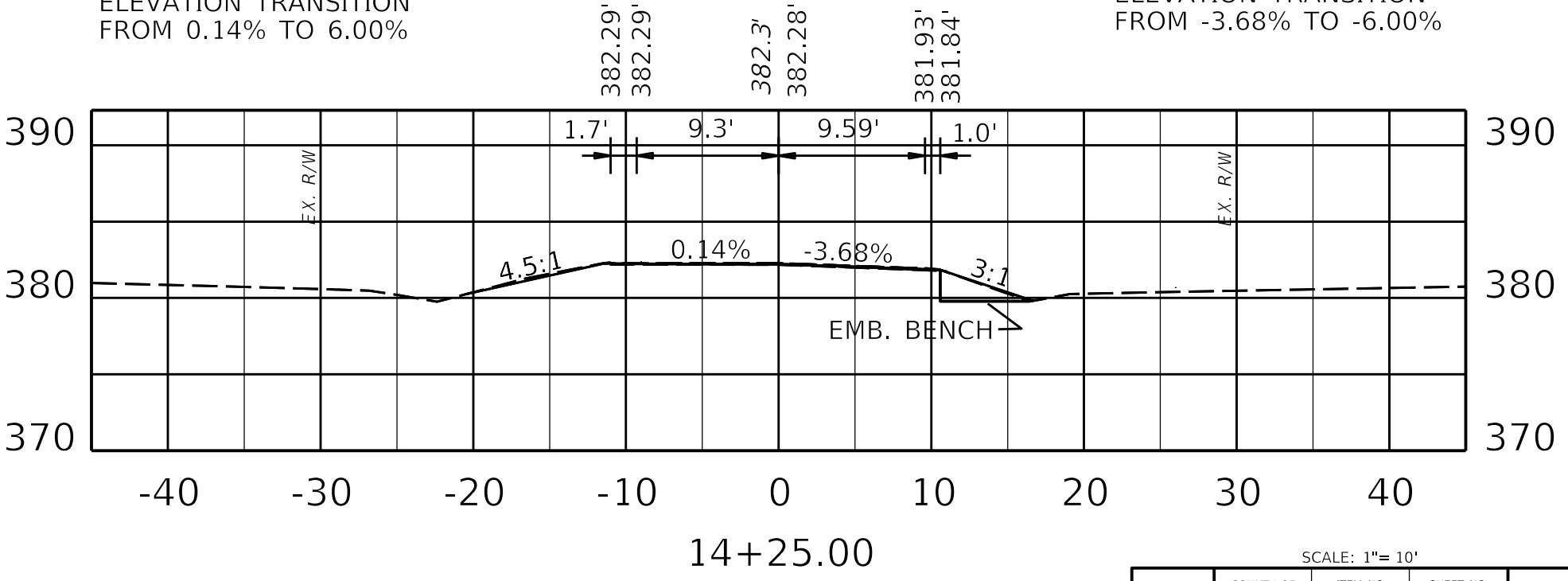
CROSS SECTION QUANTITIES

FOR VOLUMES SEE SHEET X1 CROSS SECTION QUANTITIES

STA. 14+25 BEGIN MILLING
1.5" DEPTH FULL WIDTH

LT. STA. 14+25 BEGIN SUPER ELEVATION TRANSITION FROM 0.14% TO 6.00%

RT. STA. 14+25 BEGIN SUPER ELEVATION TRANSITION FROM -3.68% TO -6.00%



BEGIN CONSTRUCTION
STATION 14+25

SCALE: 1"= 10'

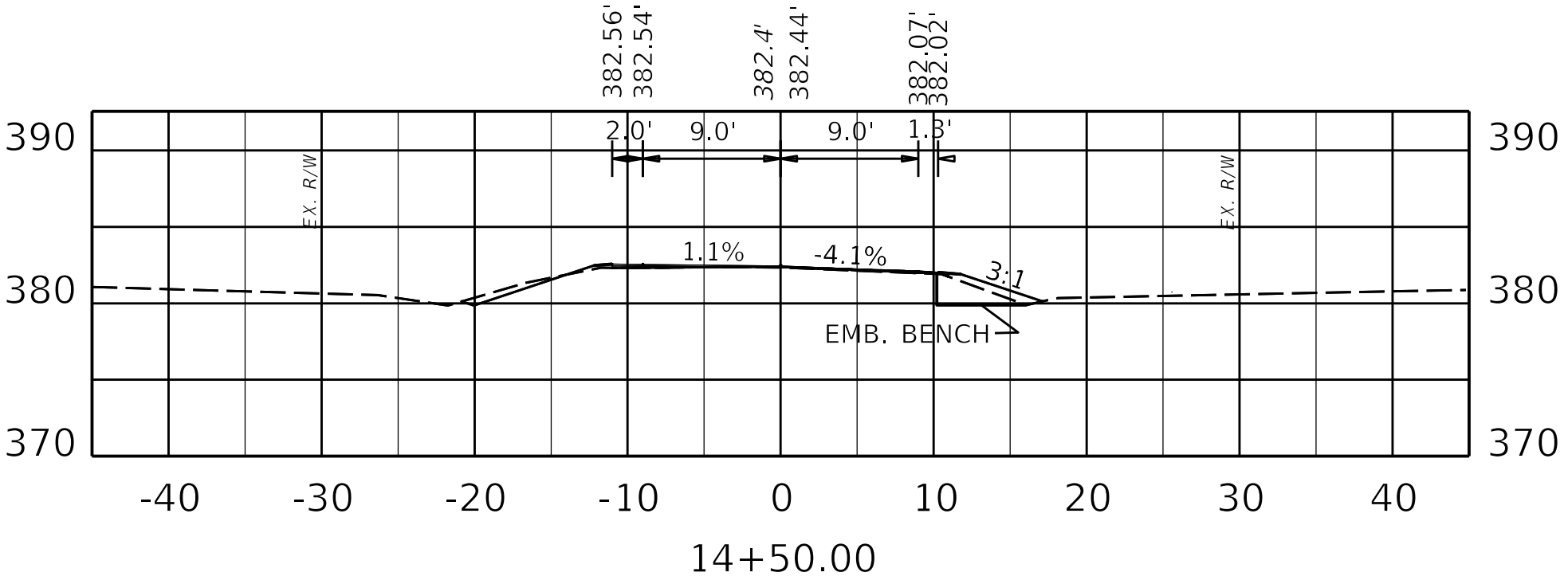
COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X2

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 14+25

WEBSTER COUNTY
117GR21P030 - FD05 & FD04

9' RT. MILLING DEPTH 1.2"



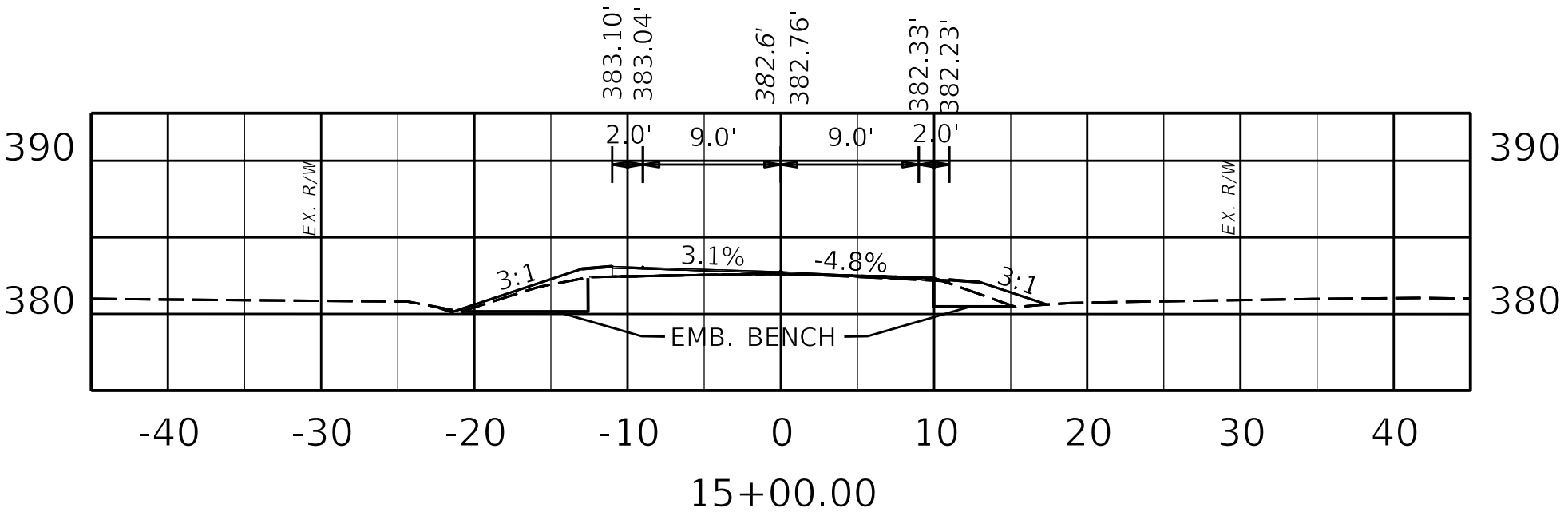
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X3

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 14+50

9' RT. MILLING DEPTH 1.9"



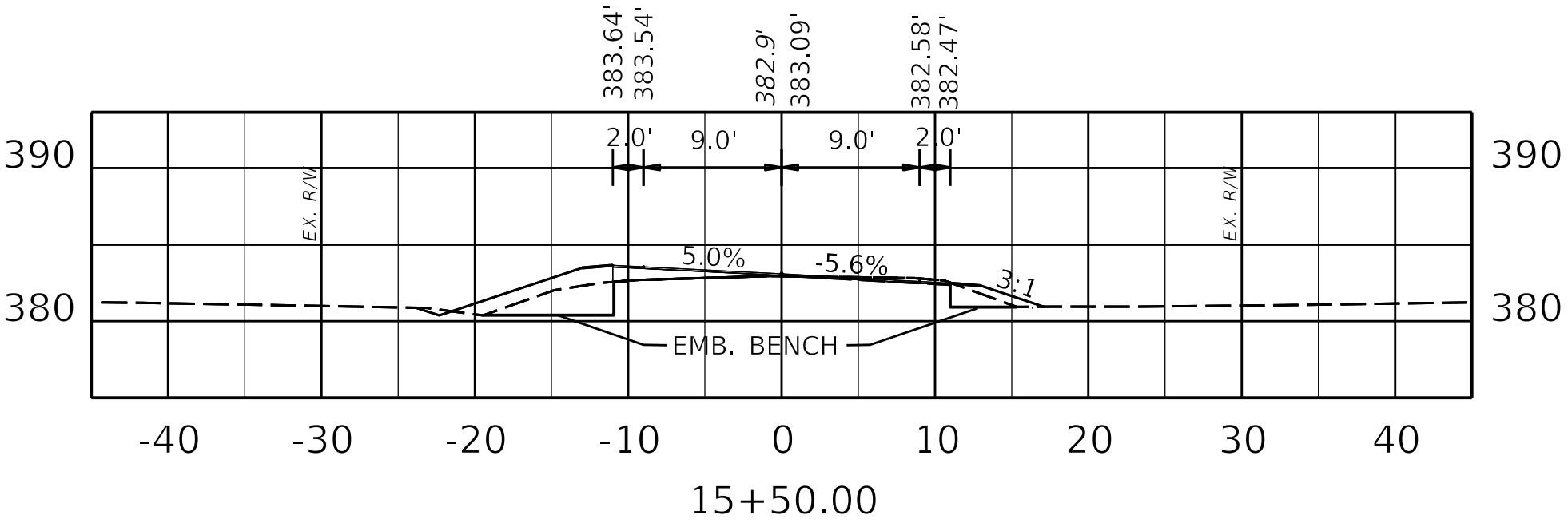
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X4

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 15+00

9' RT. MILLING DEPTH 3.7"



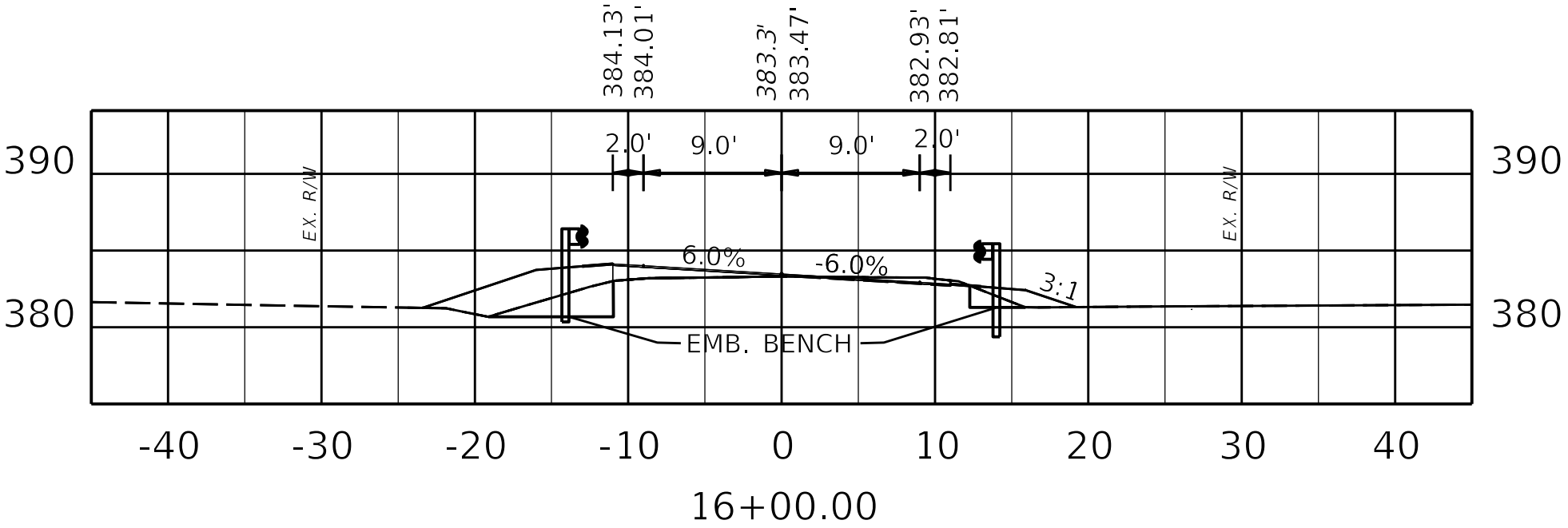
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X5

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 15+50

9' RT. MILLING DEPTH 4.9"



LT. STA. 15+75 END SUPER ELEVATION TRANSITION FROM 0.14% TO 6.00%

RT. STA. 15+75 END SUPER ELEVATION TRANSITION FROM -3.68% TO -6.00%

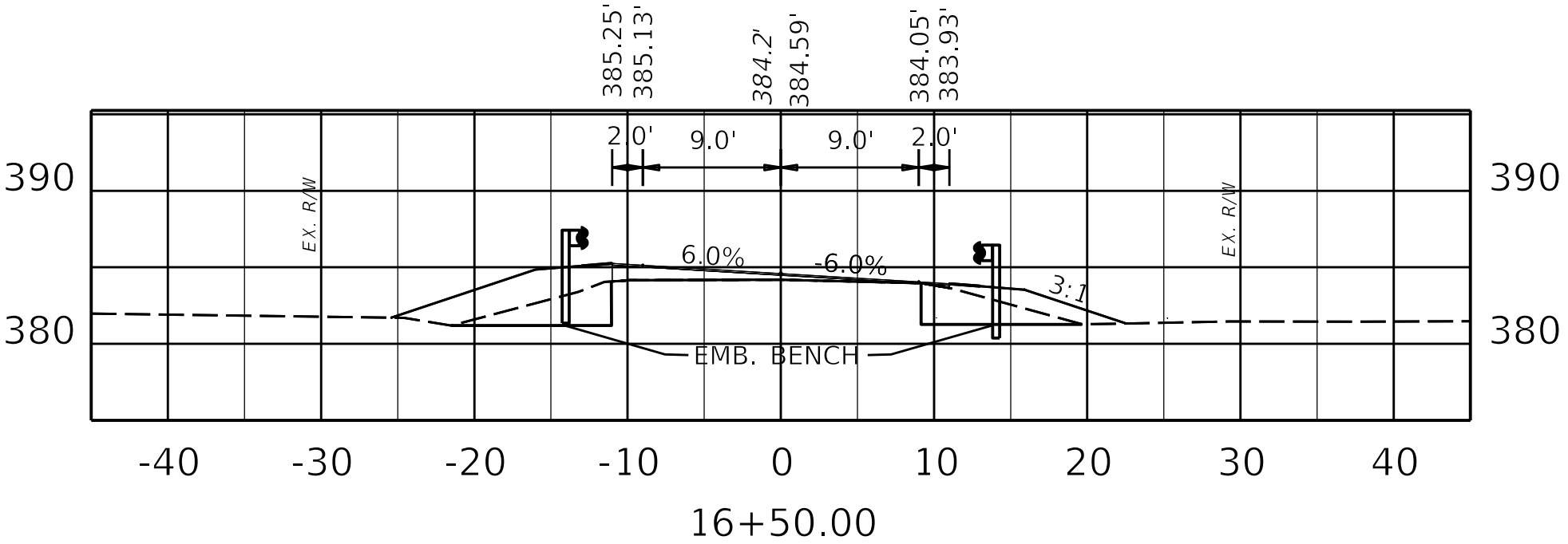
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X6

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 16+00

9' RT MILLING .25" DEPTH

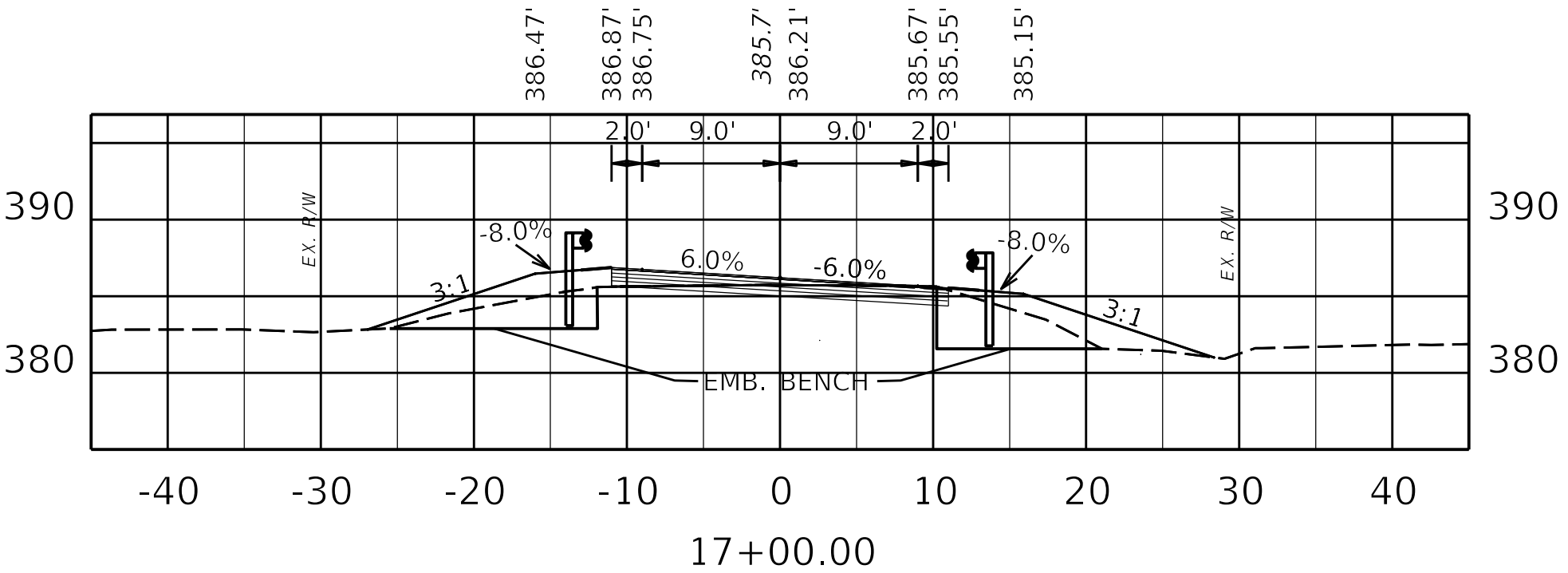


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X7

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 16+50



STA. 16+80 BEGIN FULL DEPTH CONSTRUCTION

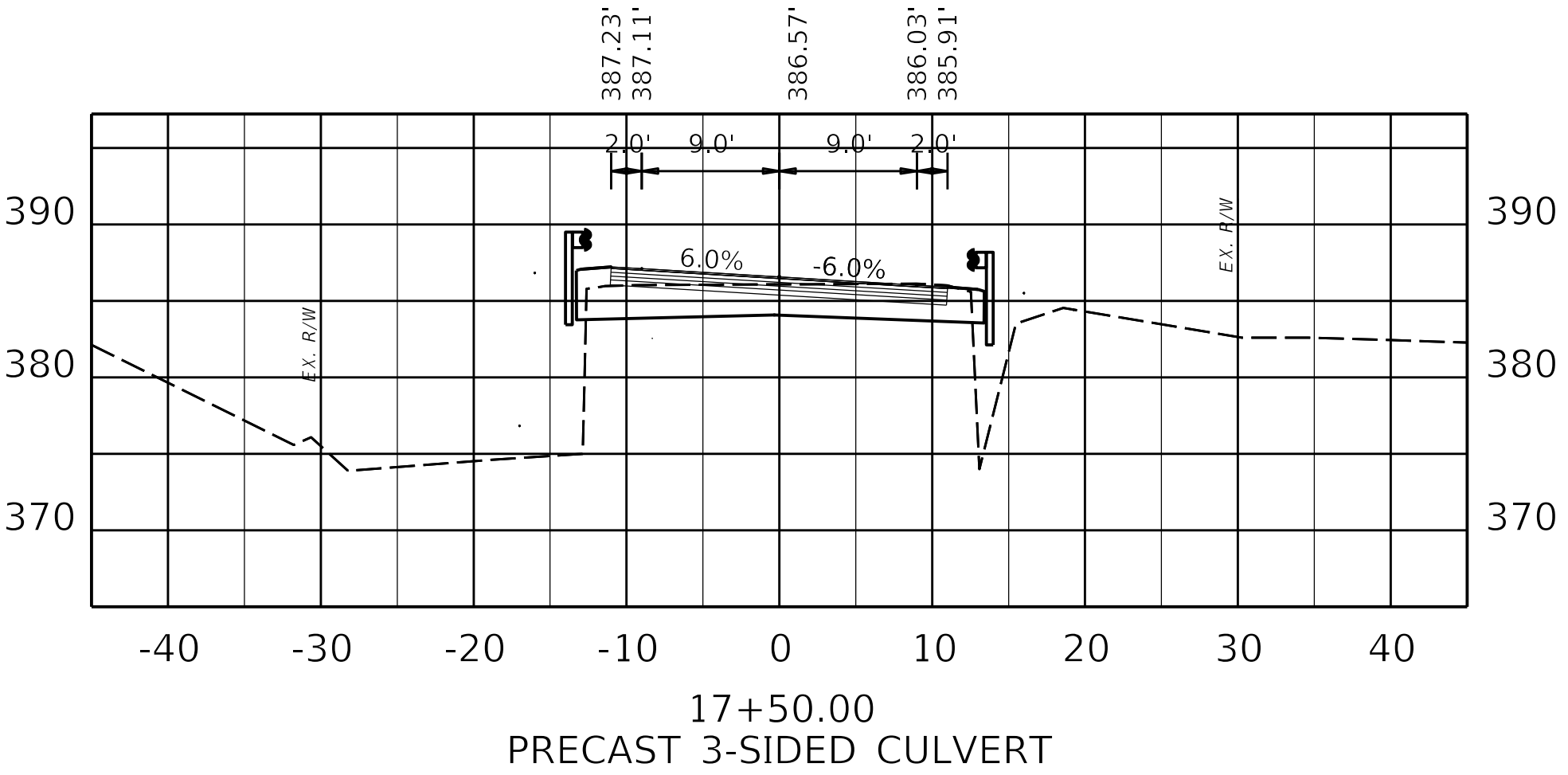
STA. 16+80 9' RT END MILLING .25" DEPTH

SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X8

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 17+00



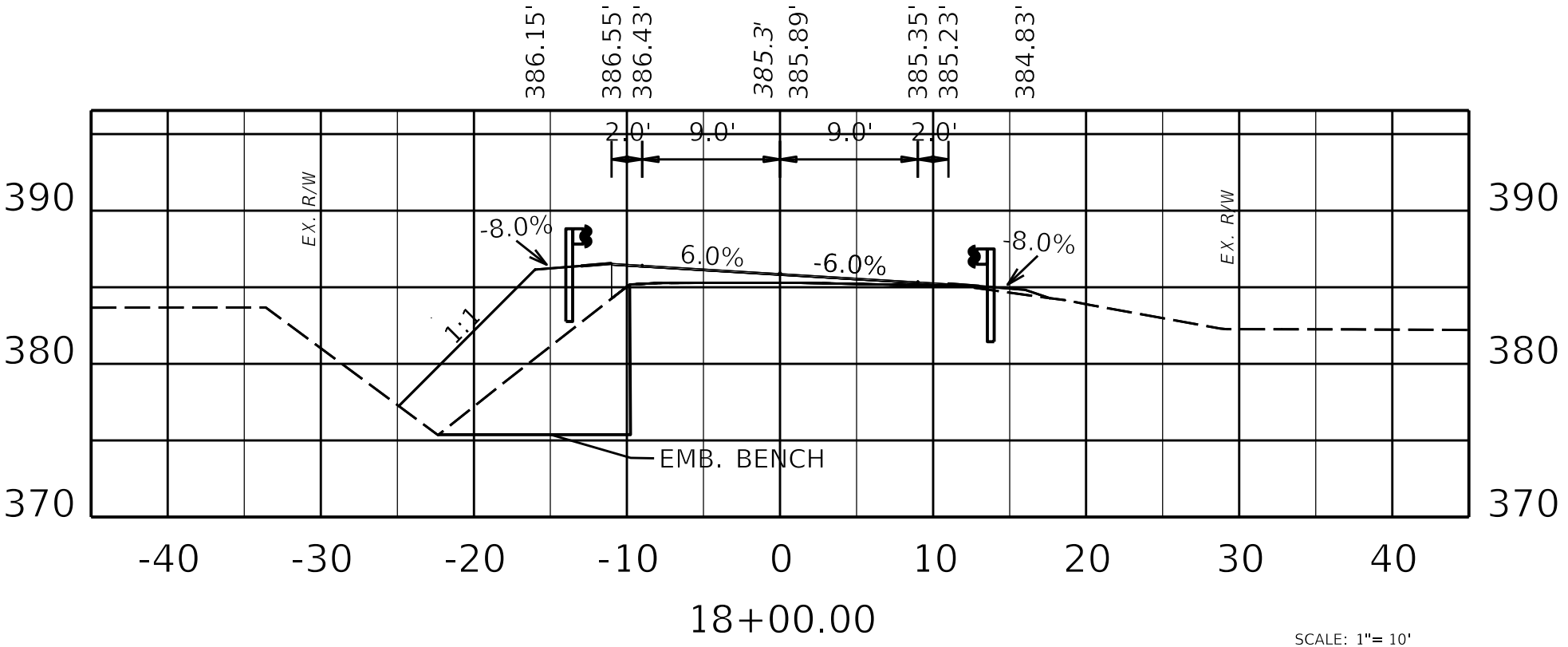
17+50.00
PRECAST 3-SIDED CULVERT

SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X9

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 17+50

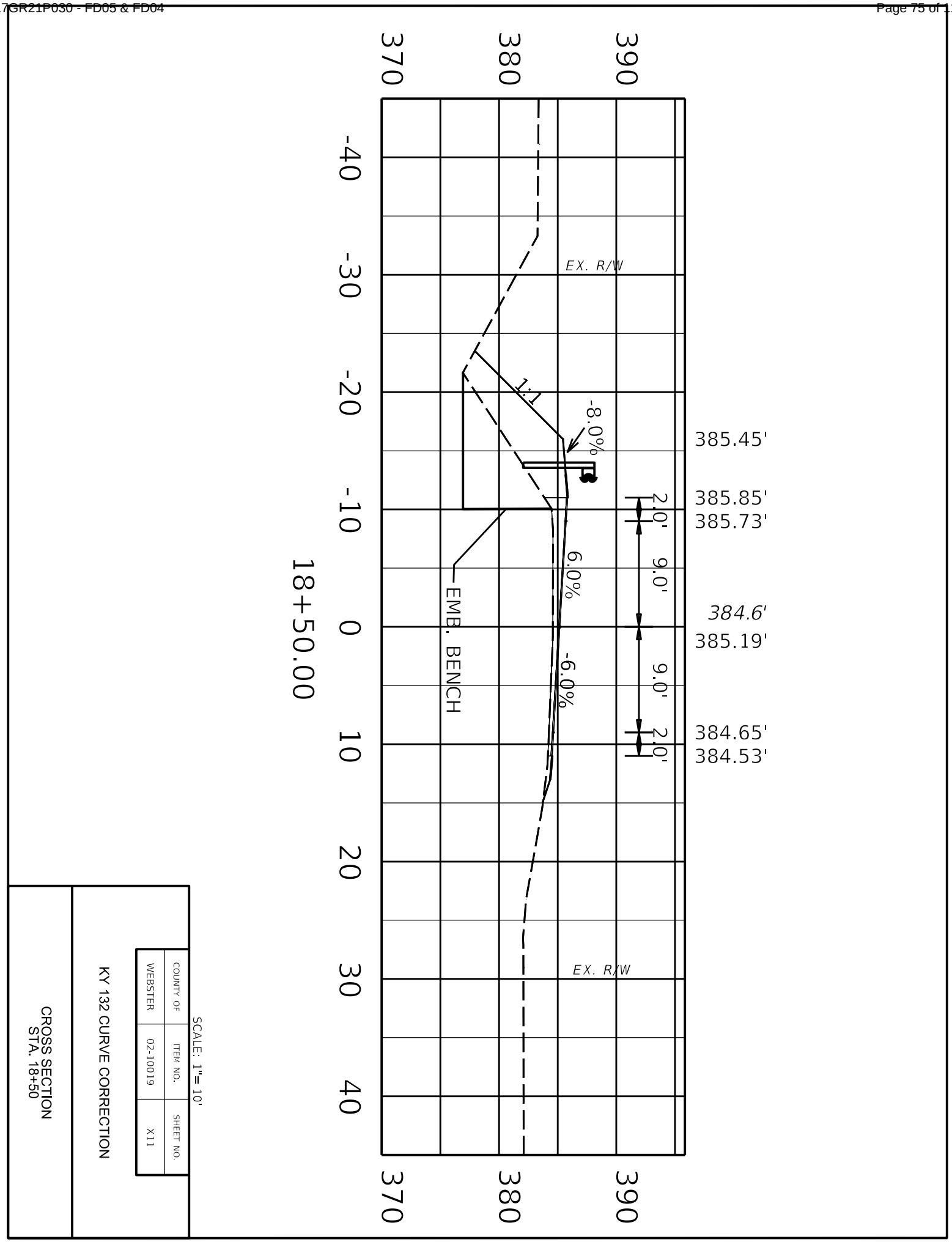


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X10

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 18+00

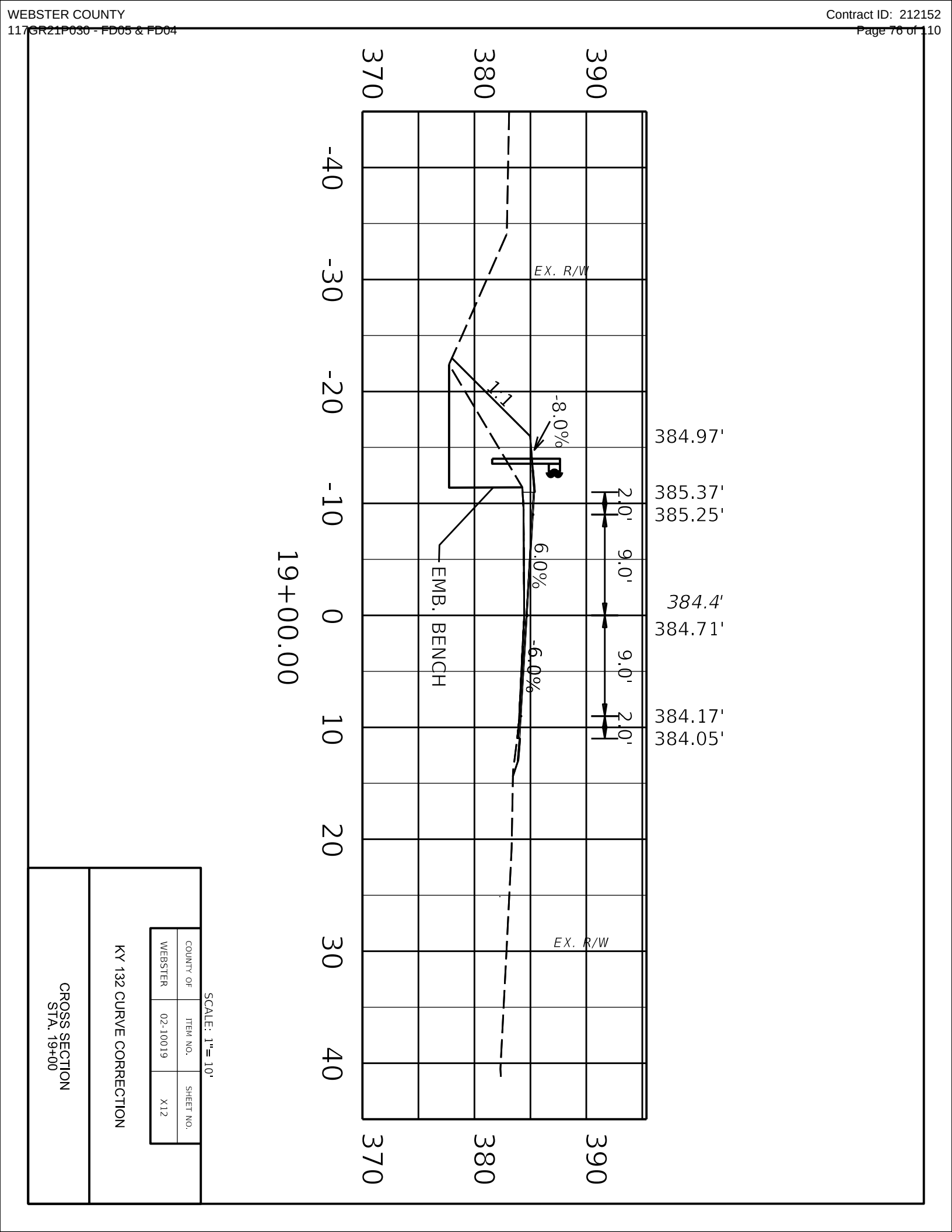


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X11

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 18+50

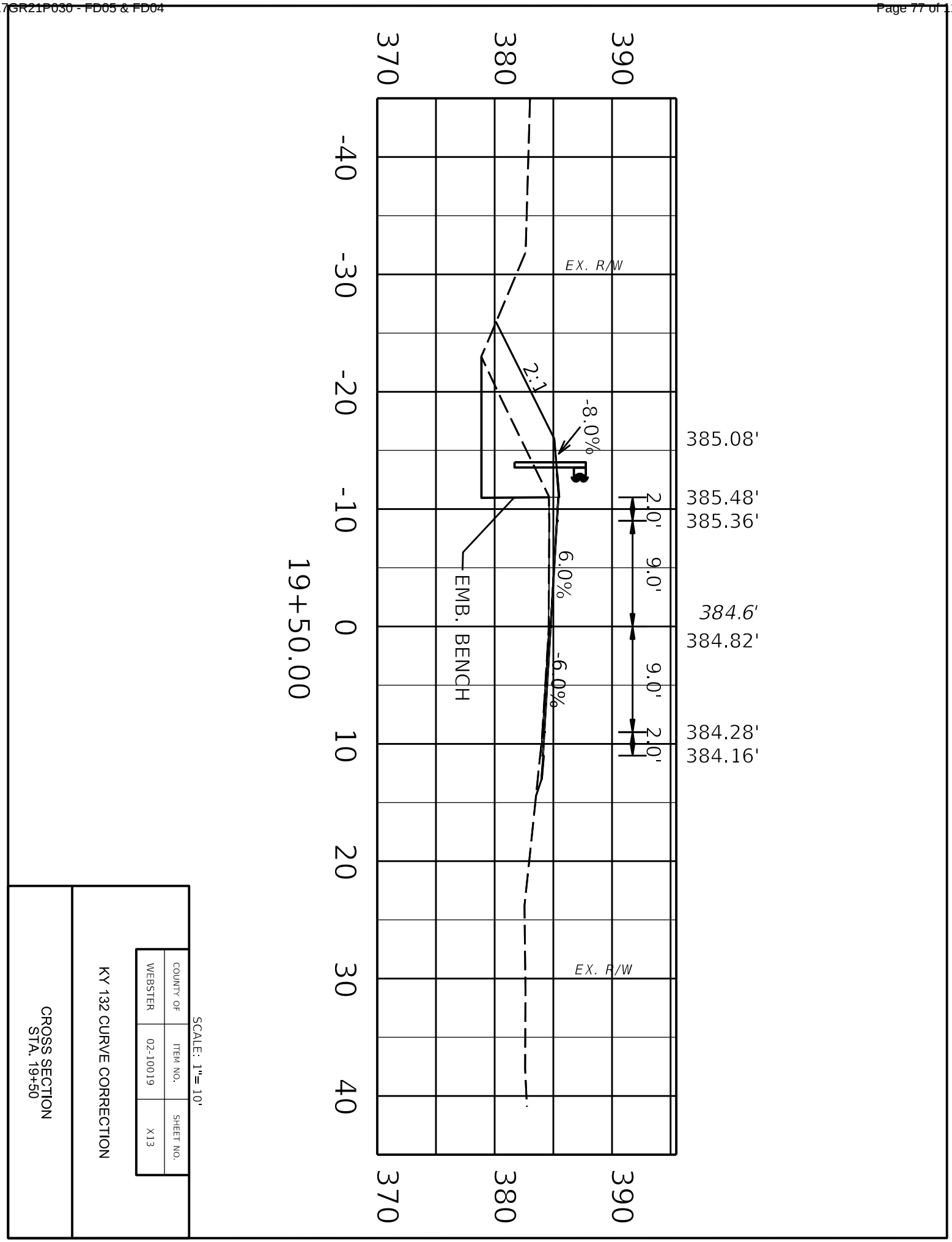


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X12

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 19+00

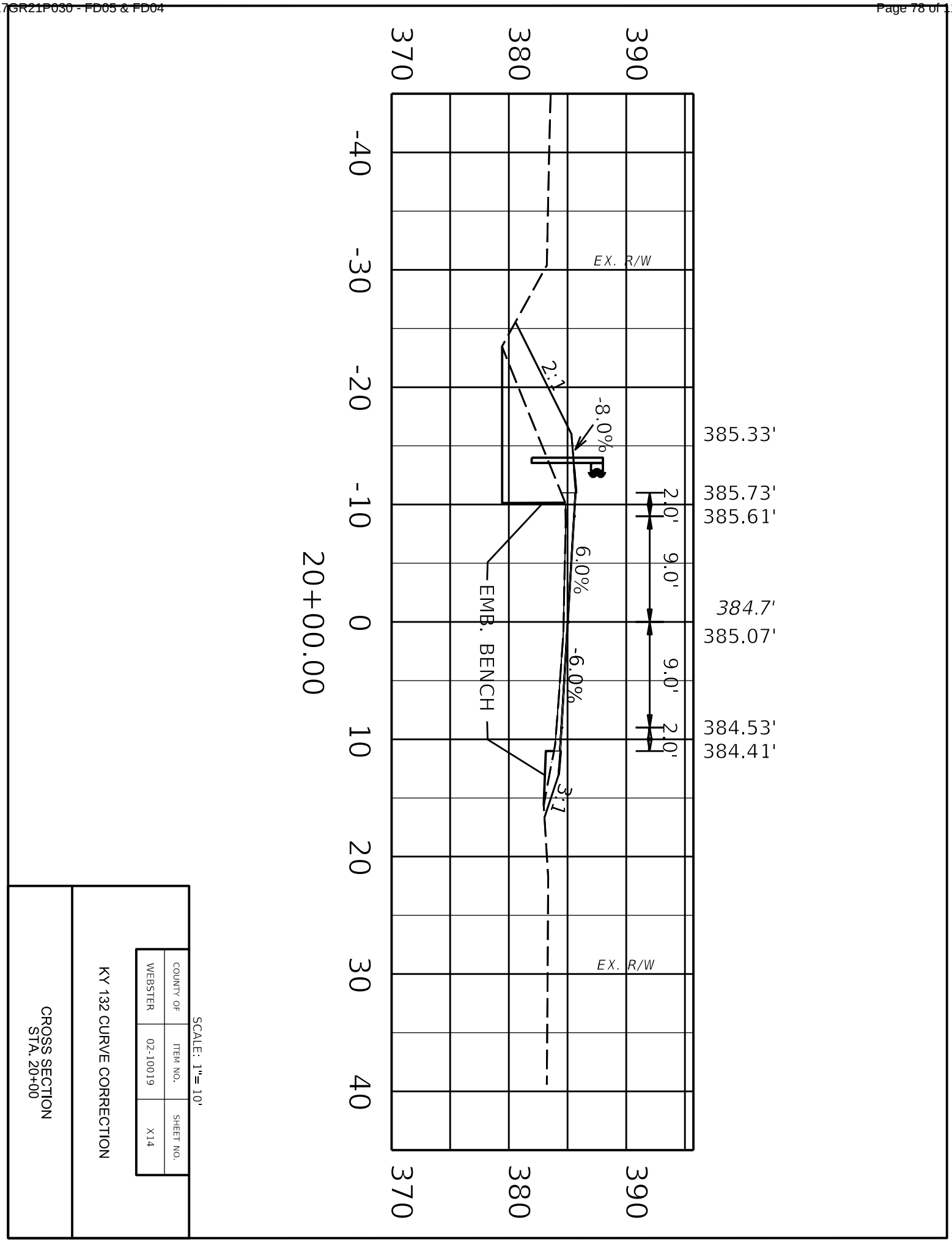


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X13

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 19+50

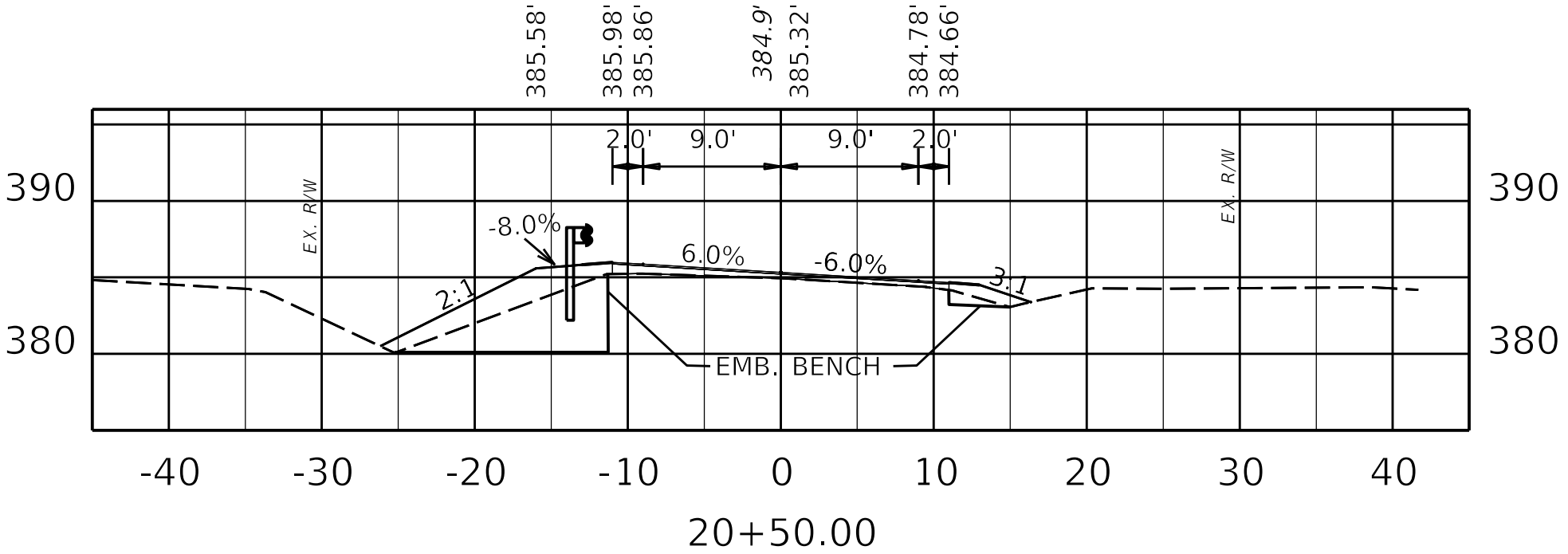


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X14

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 20+00

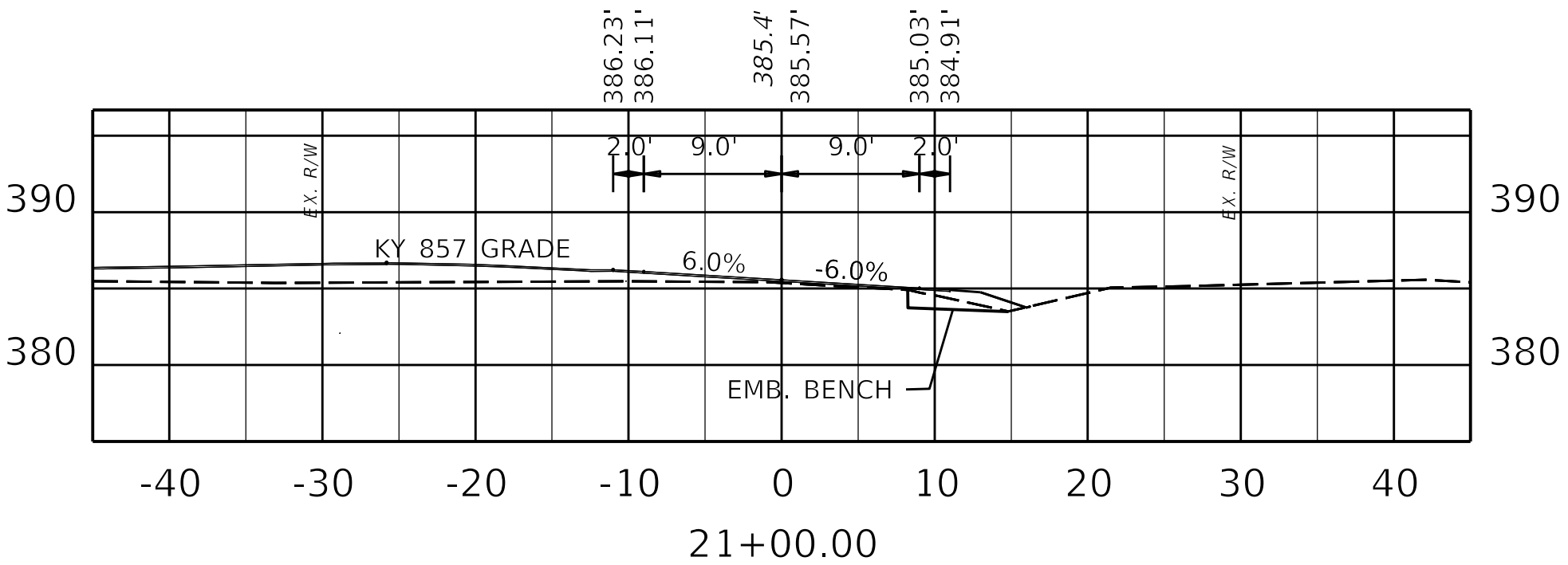


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X15

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 20+50



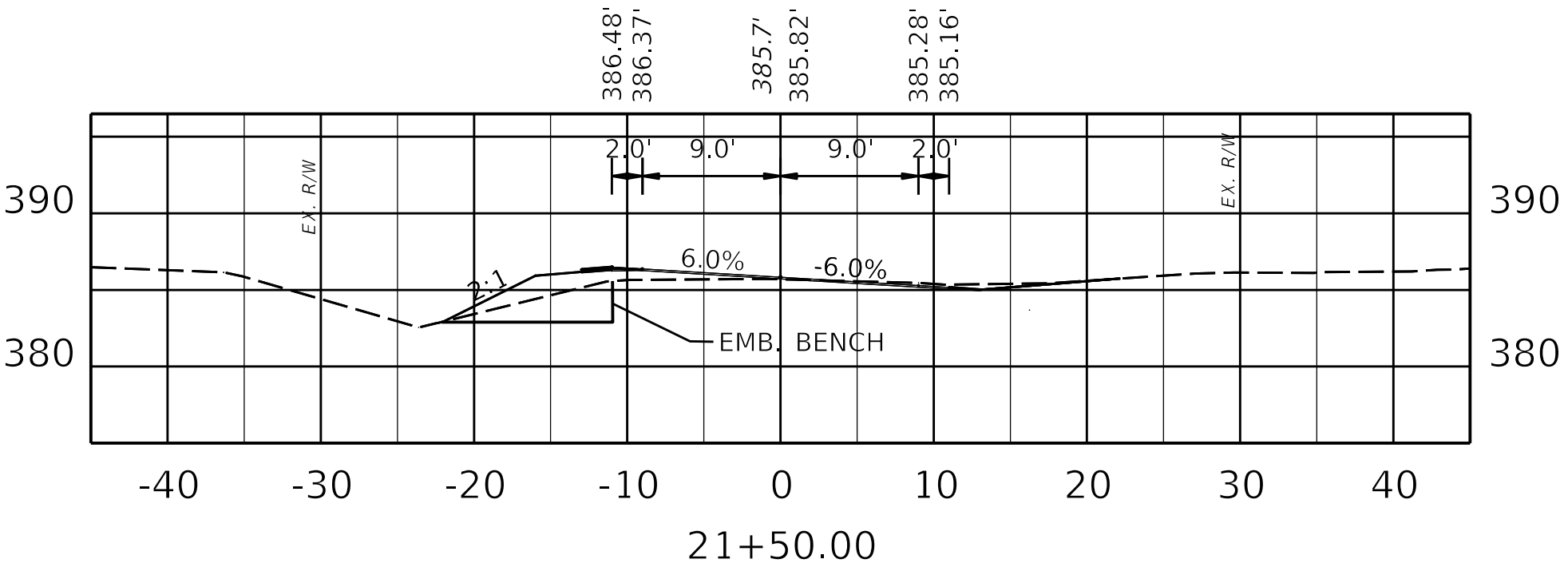
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X16

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 21+00

STA. 21+50 9' RT BEGIN MILLING
3.3" DEPTH

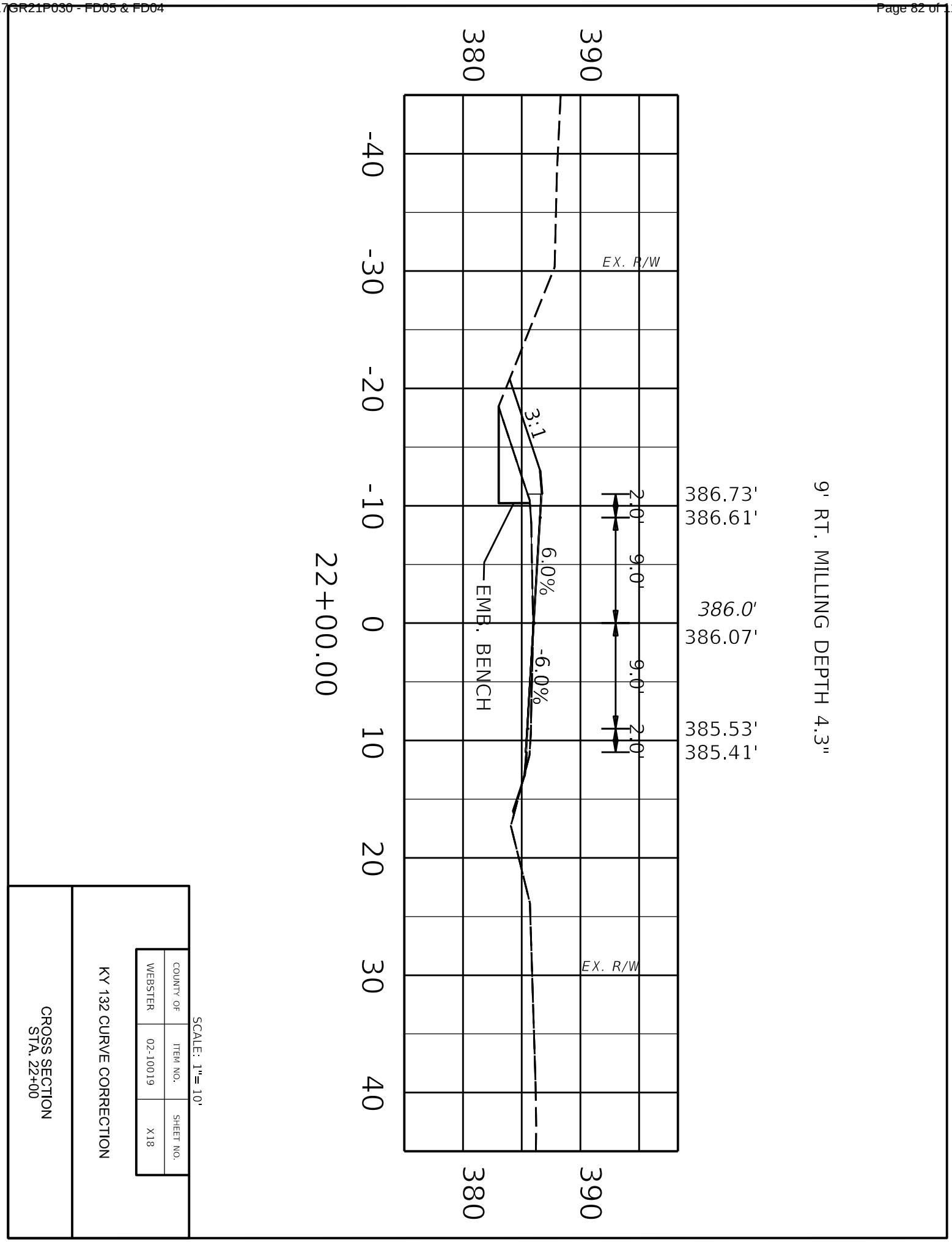


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X17

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 21+50



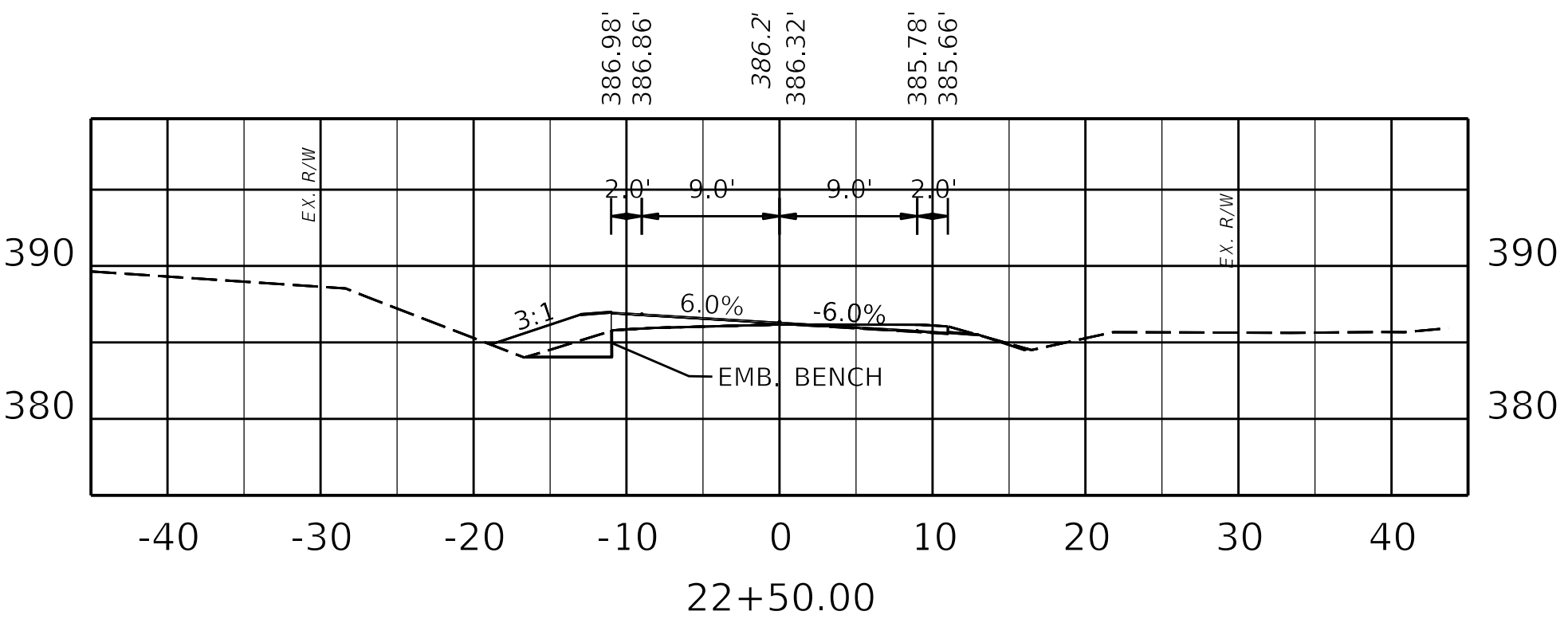
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X18

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 22+00

9' RT. MILLING DEPTH 5.8"

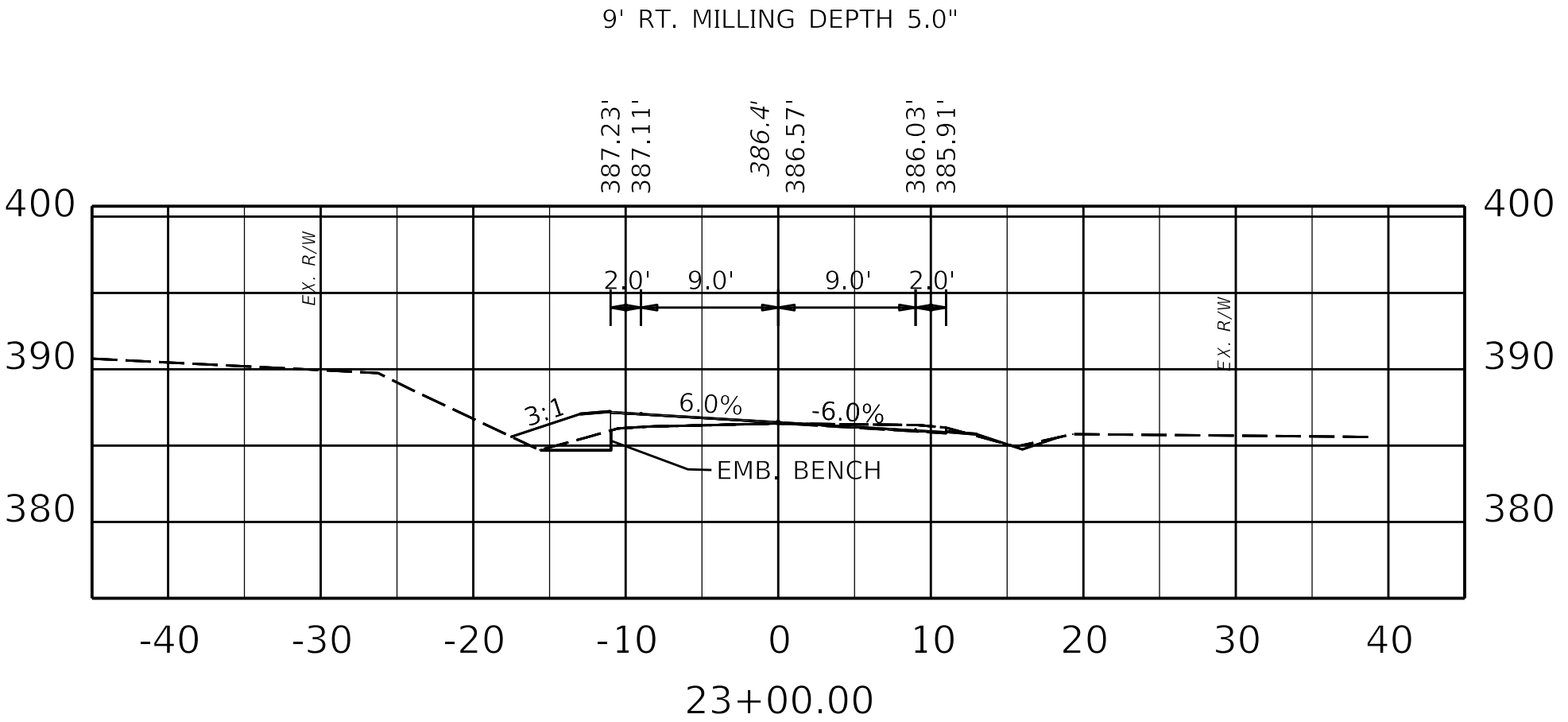


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X19

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 22+50



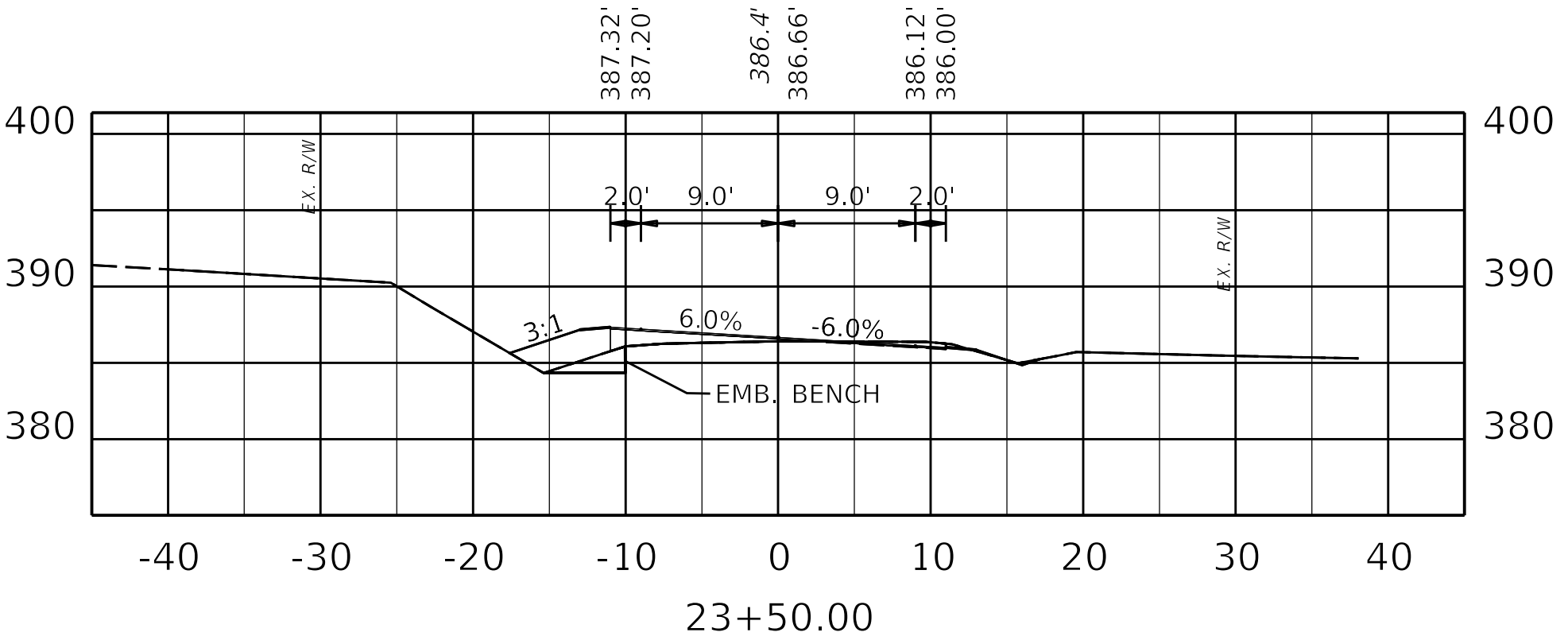
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X20

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 23+00

9' RT. MILLING DEPTH 4.2"

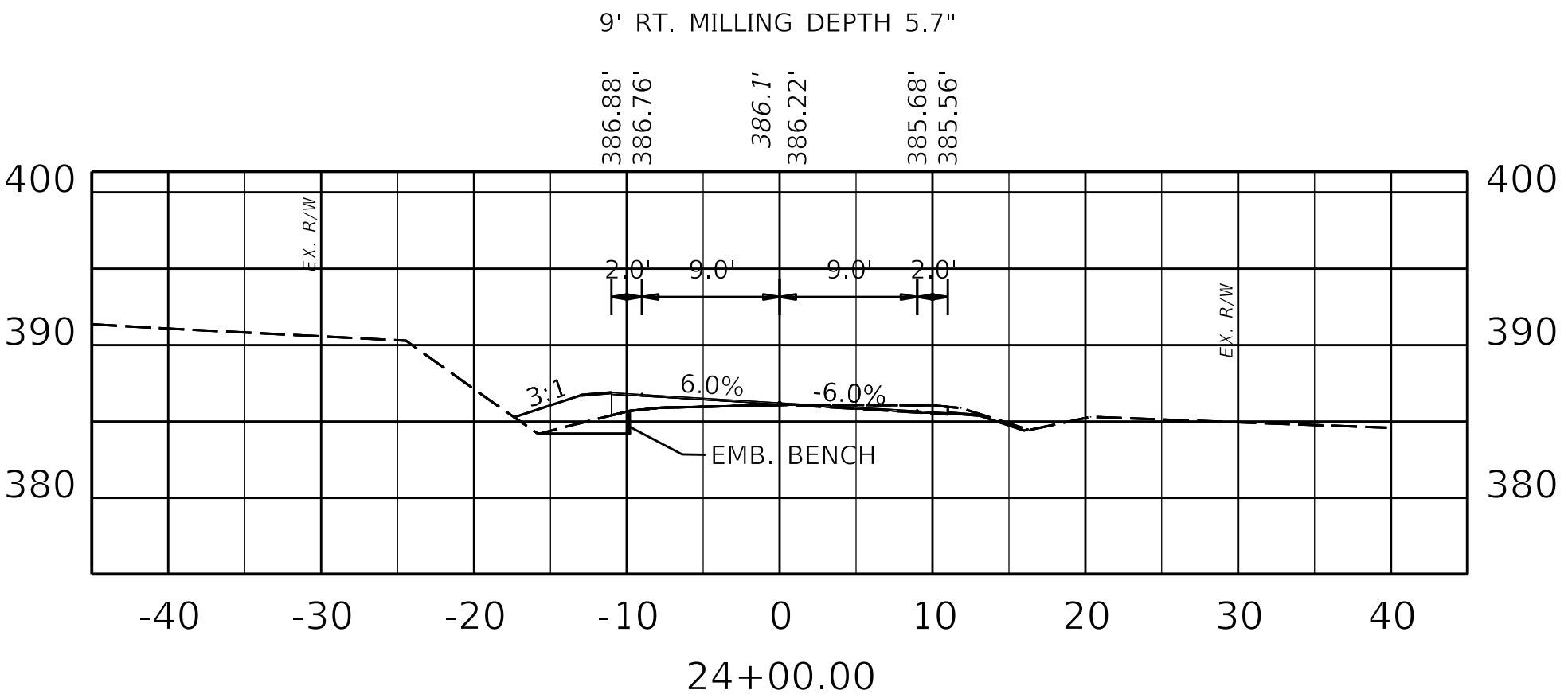


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X21

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 23+50



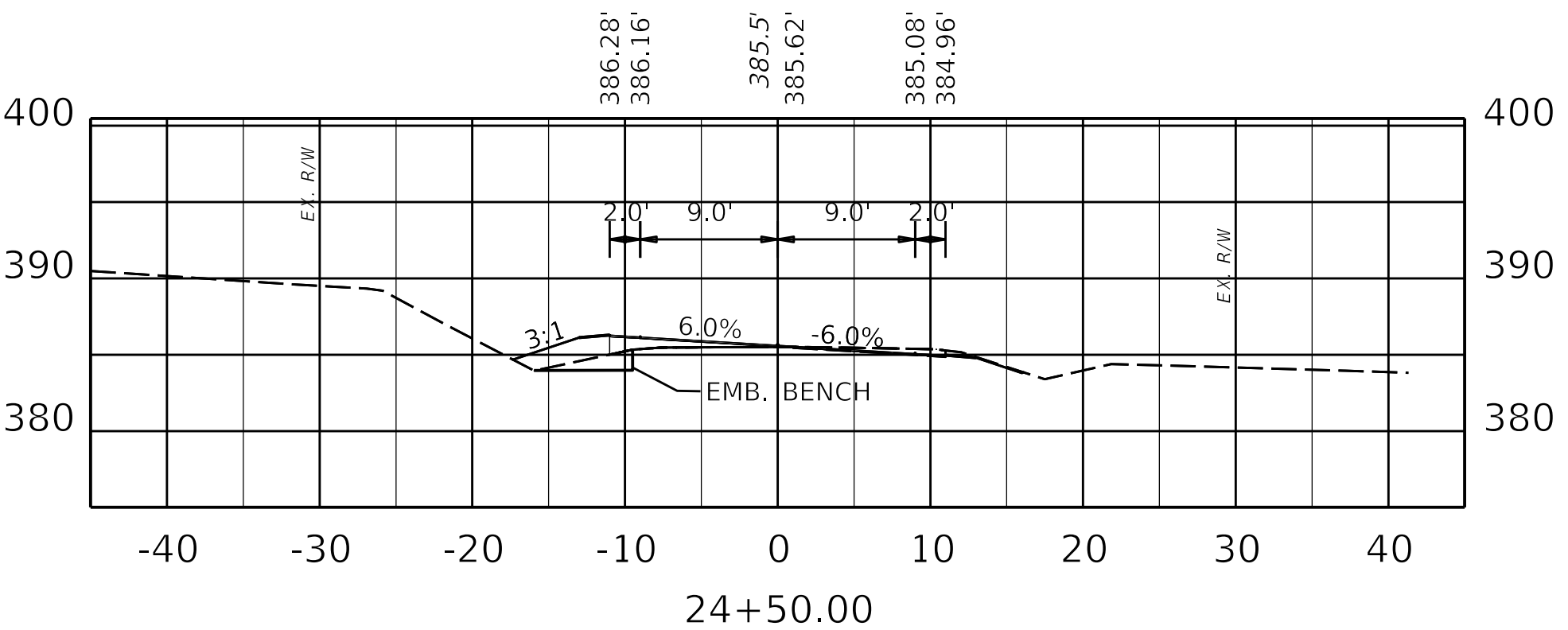
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X22

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 24+00

9' RT. MILLING DEPTH 4.8"

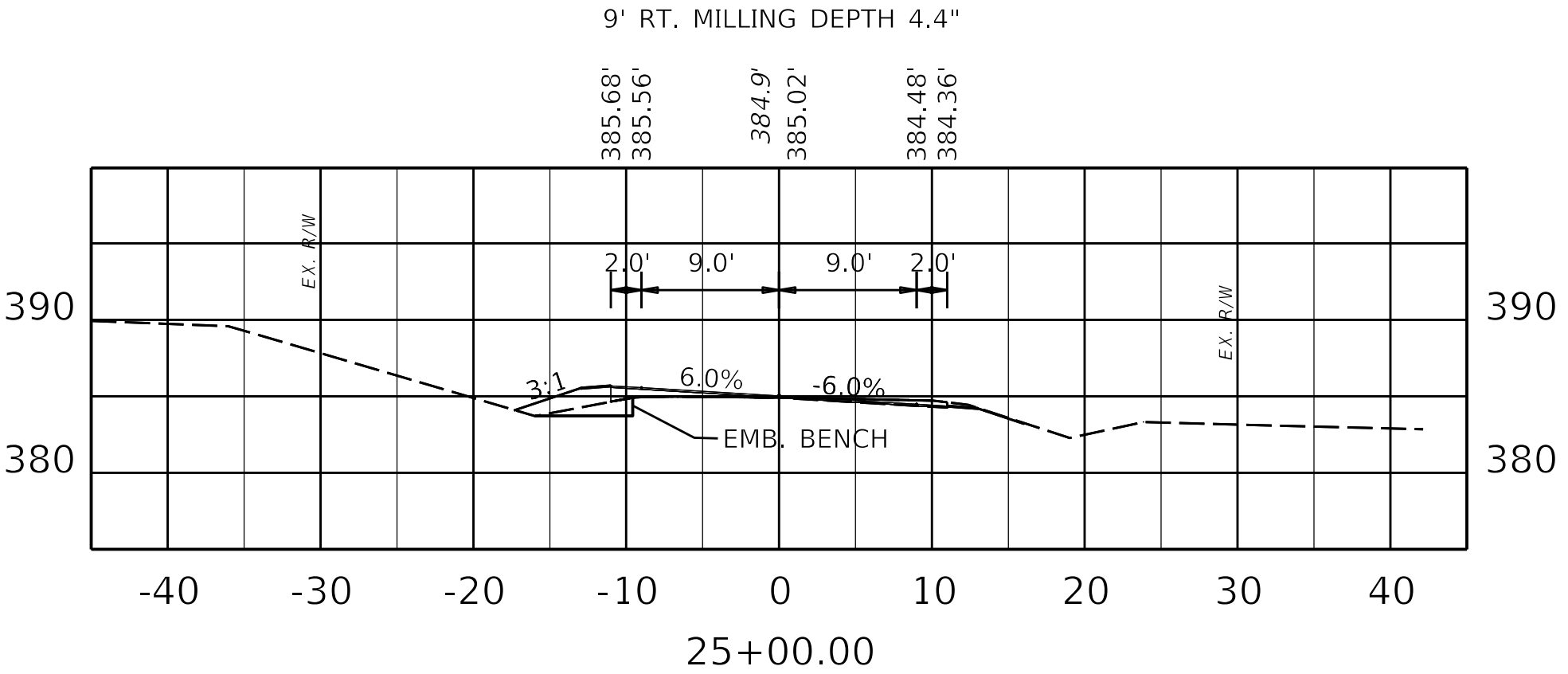


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X23

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 24+50



SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X24

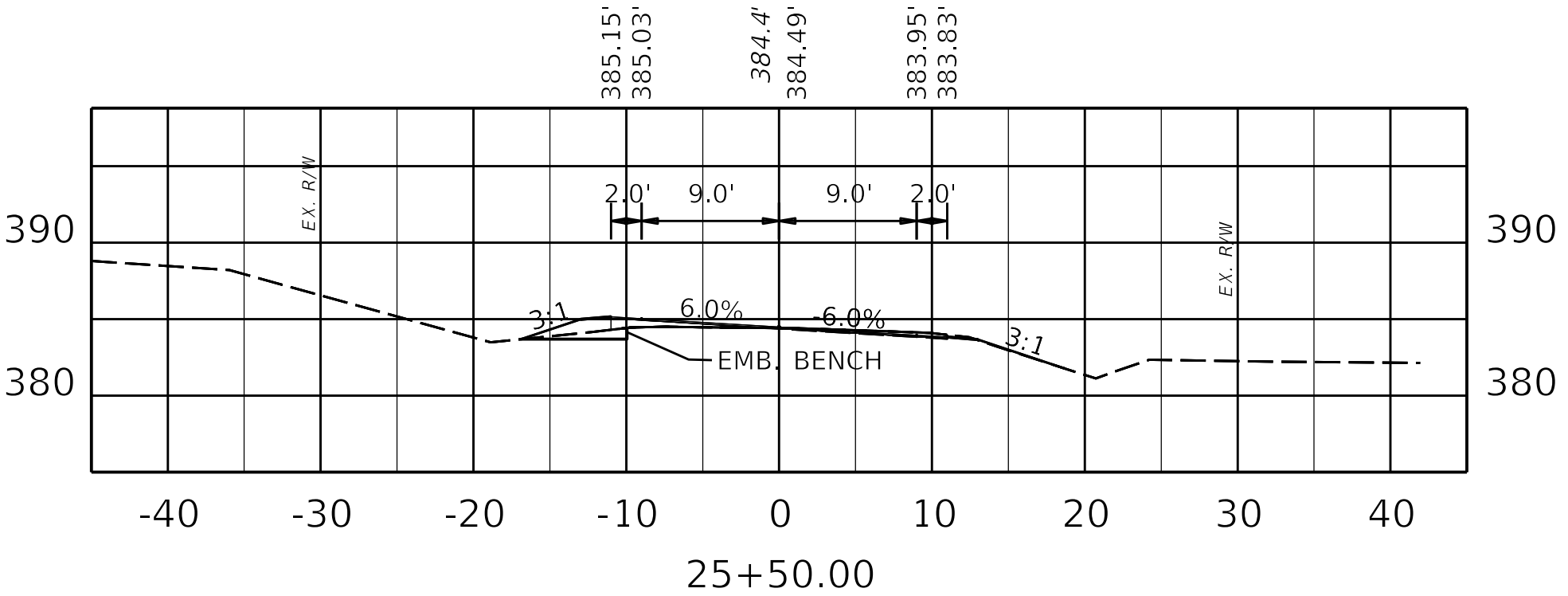
KY 132 CURVE CORRECTION

CROSS SECTION
STA. 25+00

LT. STA. 25+75 BEGIN SUPER
ELEVATION TRANSITION
FROM 6.00% TO 1.84%

9' RT. MILLING DEPTH 3.7"

RT. STA. 25+75 BEGIN SUPER
ELEVATION TRANSITION
FROM -6.00% TO -4.91%



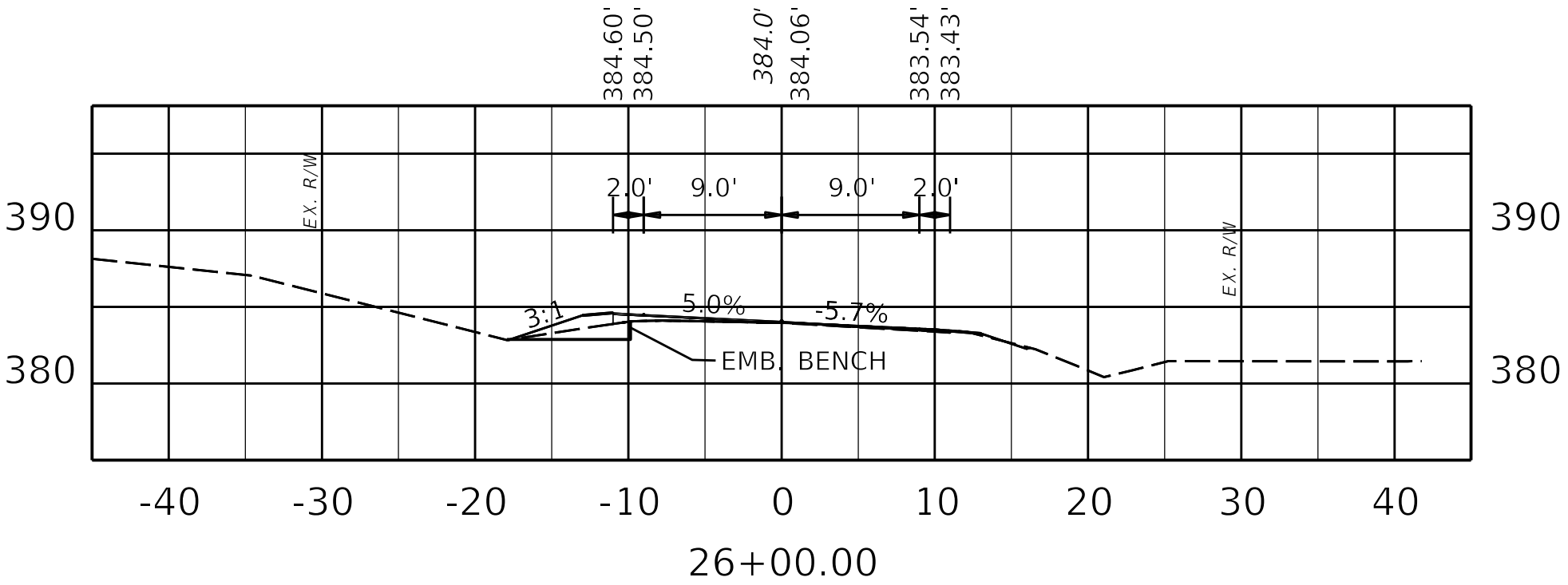
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X25

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 25+50

9' RT. MILLING DEPTH 3.7"



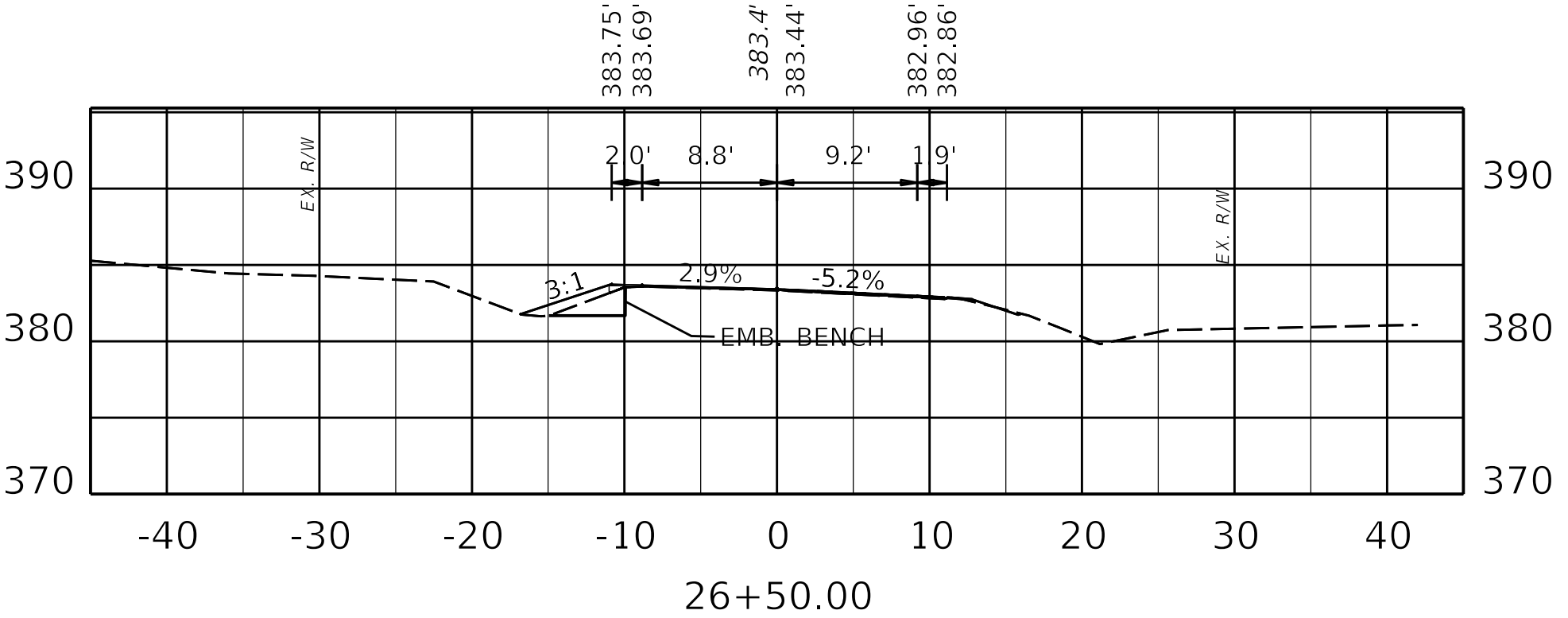
SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X26

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 26+00

9' RT. MILLING DEPTH 1.5"



SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X27

KY 132 CURVE CORRECTION

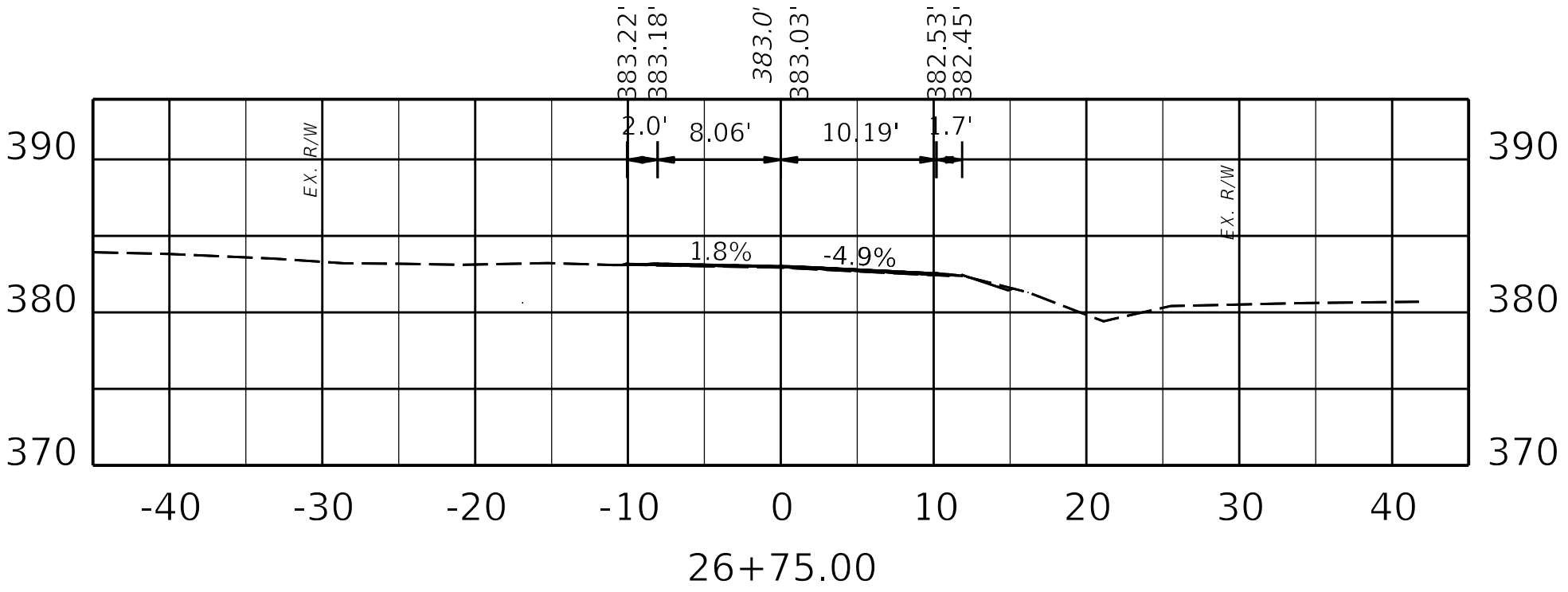
CROSS SECTION
STA. 26+50

END CONSTRUCTION STATION 26+75

LT. STA. 26+75 END SUPER ELEVATION TRANSITION FROM 6.00% TO 1.84%

STA 26+75 END MILLING 1.5" DEPTH FULL WIDTH

RT. STA. 26+75 END SUPER ELEVATION TRANSITION FROM -6.00% TO -4.91%

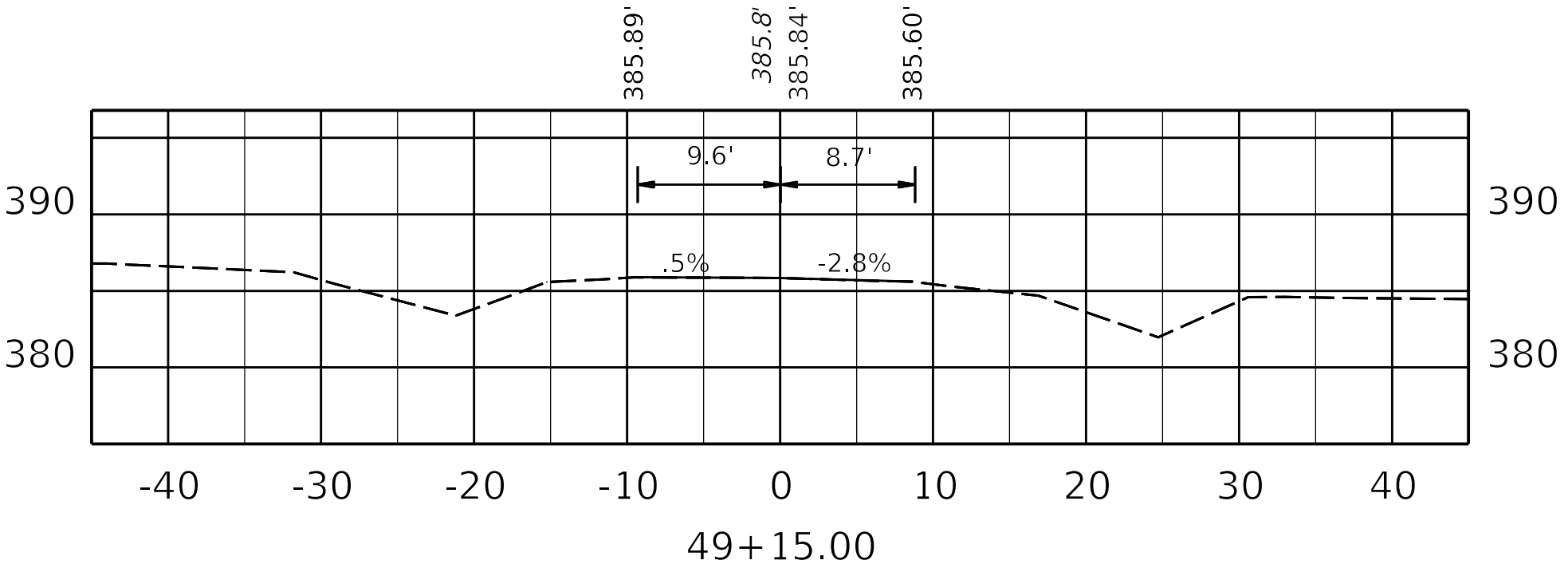


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X28

KY 132 CURVE CORRECTION

CROSS SECTION
STA. 26+75



LT. STA. 49+15 BEGIN SUPER ELEVATION TRANSITION FROM .45% TO .50%

BEGIN CONSTRUCTION STATION 49+15

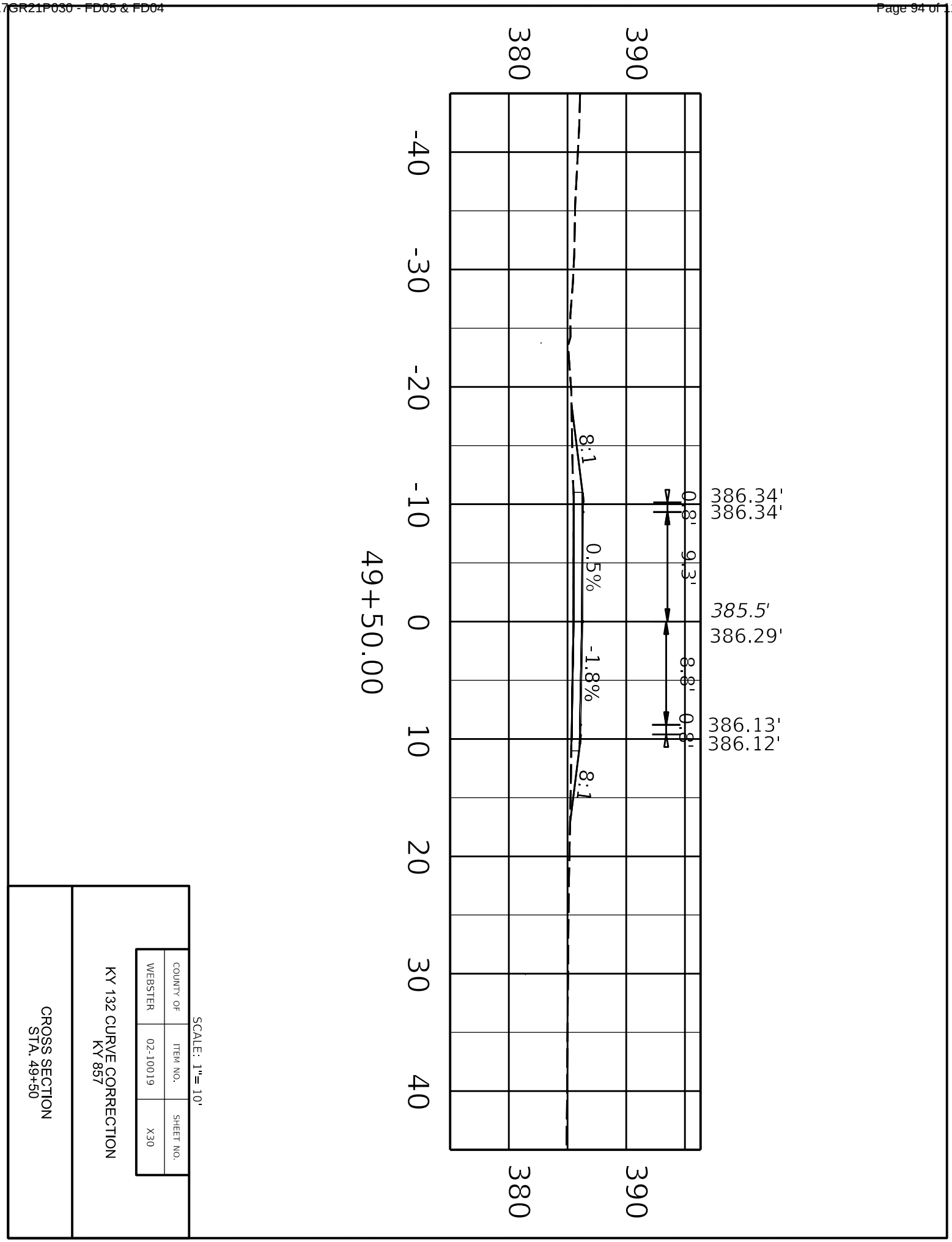
RT. STA. 49+15 BEGIN SUPER ELEVATION TRANSITION FROM -2.77% TO -.50%

SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X29

KY 132 CURVE CORRECTION
KY 857

CROSS SECTION
STA. 49+15

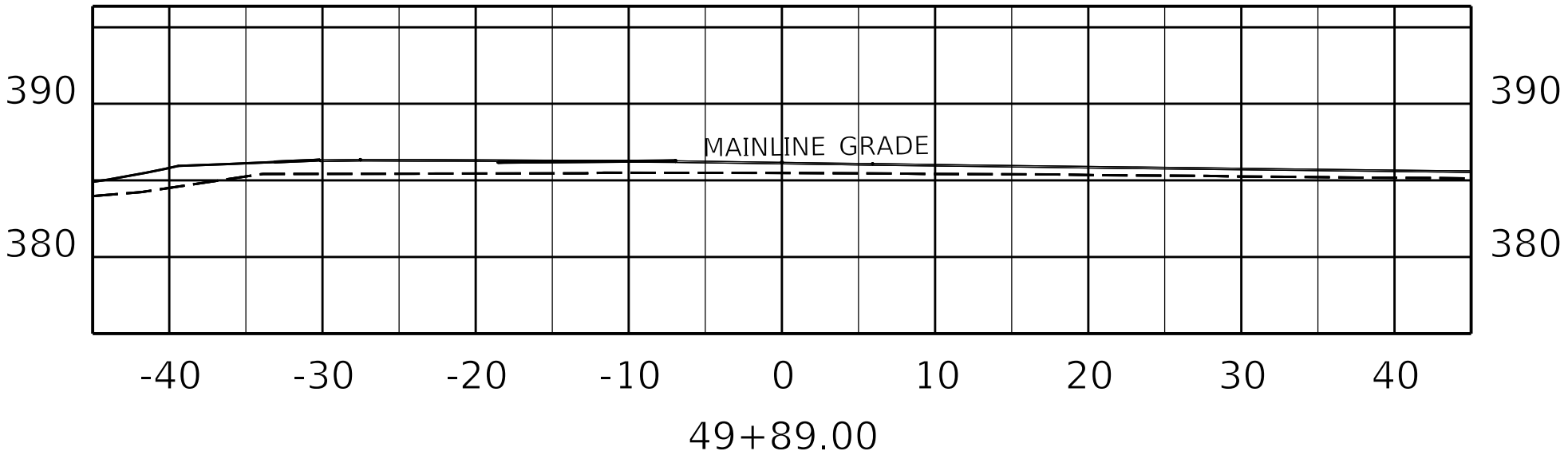


SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X30

KY 132 CURVE CORRECTION
KY 857

CROSS SECTION
STA. 49+50



SCALE: 1"= 10'

COUNTY OF	ITEM NO.	SHEET NO.
WEBSTER	02-10019	X31

KY 132 CURVE CORRECTION
KY 857

CROSS SECTION
STA. 49+89

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

Section Engineer: _____ **District & County: _____**

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

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

Printed Section Engineer's Representative_____ & Date_____

Signature Section Engineer's Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

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

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____& Date_____

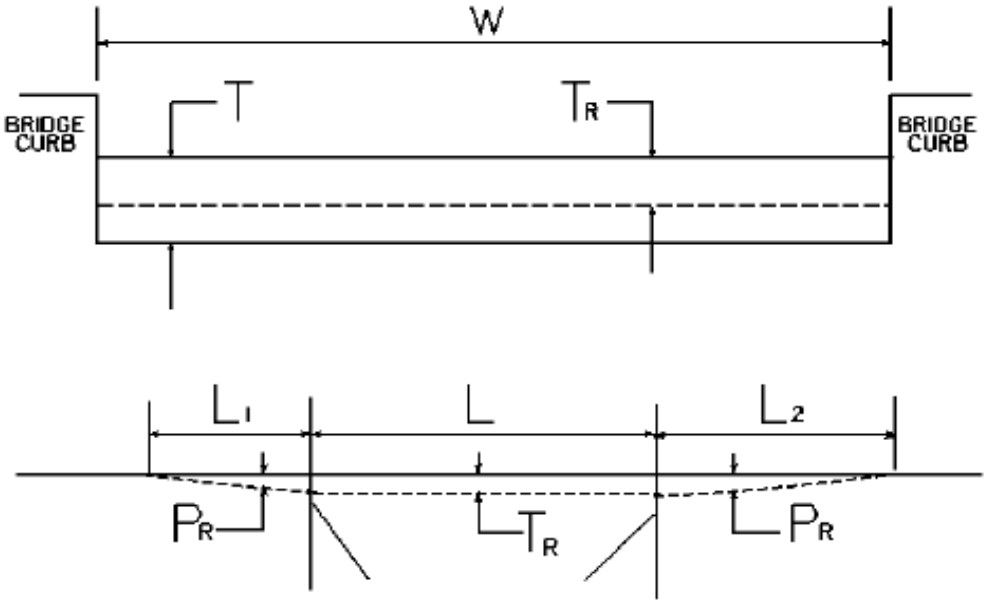
Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

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

Completed Form Submitted to Section Engineer Date: _____ By: _____

BRIDGE DETAIL FOR PAVING PROJECT



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

Route	Bridge No.	MP	W (ft)	T (in)	L_1 (ft)	L_2 (ft)	T_R (in)	L (ft)	P_R (in)
KY 132	B00126N	11.224	24.000	1.000	100.000	100.000	1.000	35.000	1.000
KY 132	B00061N	12.630	24.000	0.000	100.000	100.000	0.000	115.000	1.000
KY 132	B00060N	14.169	24.000	1.000	100.000	100.000	1.000	20.000	1.000

01/01/2009

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2020.*

SUPPLEMENTAL SPECIFICATIONS

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

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

2020 KENTUCKY STANDARD DRAWINGS

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

LABOR AND WAGE REQUIREMENTS
APPLICABLE TO OTHER THAN FEDERAL-AID SYSTEM PROJECTS

I. APPLICATION

1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.

3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

II. NONDISCRIMINATION OF EMPLOYEES

AN ACT OF THE KENTUCKY
GENERAL ASSEMBLY TO PREVENT
DISCRIMINATION IN EMPLOYMENT
KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

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

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

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

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

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

Revised: January 25, 2017

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

Kentucky Equal Employment Opportunity Act of 1978

The requirements of the Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) shall apply to this Contract. The apparent low Bidder will be required to submit EEO forms to the Division of Construction Procurement, which will then forward to the Finance and Administration Cabinet for review and approval. No award will become effective until all forms are submitted and EEO/CC has certified compliance. The required EEO forms are as follows:

- EEO-1: Employer Information Report
- Affidavit of Intent to Comply
- Employee Data Sheet
- Subcontractor Report

These forms are available on the Finance and Administration's web page under ***Vendor Information, Standard Attachments and General Terms*** at the following address: **https://www.eProcurement.ky.gov**.

Bidders currently certified as being in compliance by the Finance and Administration Cabinet may submit a copy of their approval letter in lieu of the referenced EEO forms.

For questions or assistance please contact the Finance and Administration Cabinet by email at **finance.contractcompliance@ky.gov** or by phone at 502-564-2874.

EMPLOYEE RIGHTS
UNDER THE FAIR LABOR STANDARDS ACT
THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE
$7.25 PER HOUR
BEGINNING JULY 24, 2009

OVERTIME PAY

At least 1½ times your regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR

An employee must be at least **16** years old to work in most non-farm jobs and at least **18** to work in non-farm jobs declared hazardous by the Secretary of Labor.

Youths **14** and **15** years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs under the following conditions:

No more than
- **3** hours on a school day or **18** hours in a school week;
- **8** hours on a non-school day or **40** hours in a non-school week.

Also, work may not begin before **7 a.m.** or end after **7 p.m.**, except from June 1 through Labor Day, when evening hours are extended to **9 p.m.** Different rules apply in agricultural employment.

TIP CREDIT

Employers of "tipped employees" must pay a cash wage of at least $2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee's tips combined with the employer's cash wage of at least $2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference. Certain other conditions must also be met.

ENFORCEMENT

The Department of Labor may recover back wages either administratively or through court action, for the employees that have been underpaid in violation of the law. Violations may result in civil or criminal action.

Employers may be assessed civil money penalties of up to $1,100 for each willful or repeated violation of the minimum wage or overtime pay provisions of the law and up to $11,000 for each employee who is the subject of a violation of the Act's child labor provisions. In addition, a civil money penalty of up to $50,000 may be assessed for each child labor violation that causes the death or serious injury of any minor employee, and such assessments may be doubled, up to $100,000, when the violations are determined to be willful or repeated. The law also prohibits discriminating against or discharging workers who file a complaint or participate in any proceeding under the Act.

ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa and the Commonwealth of the Northern Mariana Islands.
- Some state laws provide greater employee protections; employers must comply with both.
- The law requires employers to display this poster where employees can readily see it.
- Employees under 20 years of age may be paid $4.25 per hour during their first 90 consecutive calendar days of employment with an employer.
- Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.

For additional information:

1-866-4-USWAGE
(1-866-487-9243) TTY: 1-877-889-5627

WHD U.S. Wage and Hour Division

WWW.WAGEHOUR.DOL.GOV

U.S. Department of Labor | Wage and Hour Division

WHD Publication 1088 (Revised July 2009)

PART IV

INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V

BID ITEMS

212152

PROPOSAL BID ITEMS

Report Date 3/24/21

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	1,300.00	TON		$	
0020	00003		CRUSHED STONE BASE	375.00	TON		$	
0030	00103		ASPHALT SEAL COAT	23.00	TON		$	
0040	00190		LEVELING & WEDGING PG64-22	2,061.00	TON		$	
0050	00212		CL2 ASPH BASE 1.00D PG64-22	844.00	TON		$	
0060	00291		EMULSIFIED ASPHALT RS-2	3.00	TON		$	
0070	00301		CL2 ASPH SURF 0.38D PG64-22	5,567.00	TON		$	
0080	02562		TEMPORARY SIGNS	330.00	SQFT		$	
0090	02650		MAINTAIN & CONTROL TRAFFIC (FD05)	1.00	LS		$	
0100	02676		MOBILIZATION FOR MILL & TEXT (FD04)	1.00	LS		$	
0110	02676		MOBILIZATION FOR MILL & TEXT (FD05)	1.00	LS		$	
0120	02677		ASPHALT PAVE MILLING & TEXTURING	304.00	TON		$	
0130	02697		EDGELINE RUMBLE STRIPS	68,600.00	LF		$	
0140	06510		PAVE STRIPING-TEMP PAINT-4 IN	35,000.00	LF		$	
0150	06515		PAVE STRIPING-PERM PAINT-6 IN	60,000.00	LF		$	
0160	10020NS		FUEL ADJUSTMENT	9,456.00	DOLL	$1.00	$	$9,456.00
0170	10030NS		ASPHALT ADJUSTMENT	23,751.00	DOLL	$1.00	$	$23,751.00
0180	21289ED		LONGITUDINAL EDGE KEY	1,204.00	LF		$	
0190	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	36.00	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0200	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	12.00	EACH		$	
0210	02014		BARRICADE-TYPE III	4.00	EACH		$	
0220	02230		EMBANKMENT IN PLACE	2,258.00	CUYD		$	
0230	02351		GUARDRAIL-STEEL W BEAM-S FACE	230.00	LF		$	
0240	02355		GUARDRAIL-STEEL W BEAM-S FACE A	100.00	LF		$	
0250	02367		GUARDRAIL END TREATMENT TYPE 1	4.00	EACH		$	
0260	02562		TEMPORARY SIGNS	500.00	SQFT		$	
0270	02585		EDGE KEY	59.00	LF		$	
0280	02650		MAINTAIN & CONTROL TRAFFIC (FD04)	1.00	LS		$	
0290	02726		STAKING	1.00	LS		$	
0300	08801		GUARDRAIL-STEEL W BEAM-S FACE BR	92.00	LF		$	
0310	20205EC		PAVE MARK STOP BAR-24 IN PAINT	20.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0320	02701		TEMP SILT FENCE	625.00	LF		$	

212152

PROPOSAL BID ITEMS

Report Date 3/24/21

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0330	02703		SILT TRAP TYPE A	1.00	EACH		$	
0340	02704		SILT TRAP TYPE B	1.00	EACH		$	
0350	02706		CLEAN SILT TRAP TYPE A	3.00	EACH		$	
0360	02707		CLEAN SILT TRAP TYPE B	3.00	EACH		$	
0370	05950		EROSION CONTROL BLANKET	270.00	SQYD		$	
0380	05952		TEMP MULCH	2,300.00	SQYD		$	
0390	05985		SEEDING AND PROTECTION	1,325.00	SQYD		$	

Section: 0004 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	02731		REMOVE STRUCTURE	1.00	LS		$	
0410	23820EC		PRECAST ARCH	1.00	LS		$	

Section: 0005 - UTILITY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0420	24605ED		RELOCATE ONE UTILITY POLE	1.00	EACH		$	

Section: 0006 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0430	02569		DEMOBILIZATION	1.00	LS		$	