CALL NO. 312

CONTRACT ID. 121361

BATH COUNTY

FED/STATE PROJECT NUMBER FD04 006 0064 117-124

DESCRIPTION LEXINGTON-ASHLAND ROAD (I-64)

WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB

PRIMARY COMPLETION DATE 7/31/2013

LETTING DATE: October 19,2012

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME October 19,2012. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

TABLE OF CONTENTS

PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 09

CONTRACT ID - 121361

COUNTY -

PCN - DE00600641261

FD04 006 0064 117-124

LEXINGTON-ASHLAND ROAD (I-64) MILL AND THIN ASPHALT OVERLAY ON I-64 FROM MILEPOINT 117.830 TO MILEPOINT 123.600, A DISTANCE OF 05.77 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 09-02023.00.

GEOGRAPHIC COORDINATES LATITUDE 38:07:25.00 LONGITUDE 83:45:33.00

COMPLETION DATE(S):

COMPLETED BY 07/31/2013

APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

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 is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

SPECIAL NOTE FOR PIPE INSPECTION

Contrary to Section 701.03.08 of the 2012 Standard Specifications for Road and Bridge Construction and Kentucky Method 64-114, certification by the Kentucky Transportation Center for prequalified Contractors to perform laser/video inspection is not required on this contract. It will continue to be a requirement for the Contractor performing any laser/video pipe inspection to be prequalified for this specialized item with the Kentucky Transportation Cabinet-Division of Construction Procurement.

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.

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. (See attachment)

09/26/2012

Commonwealth of Kentucky
Finance and Administration Cabinet
OFFICE OF THE SECRETARY
Room 383, Capitol Annex
702 Capital Avenue
Frankfort, KY 40601-3462
(502) 564-4240
Fax (502) 564-6785

Steven L. Beshear
Governor

Lori H. Flanery
Secretary

SECRETARY'S ORDER 11-004

FINANCE AND ADMINISTRATION CABINET

Vendor Document Disclosure

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary to conduct a review of the records of a private vendor that holds a contract to provide goods and/or services to the Commonwealth; and

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary during the course of an audit, investigation or any other inquiry by an Executive Branch agency that involves the review of documents; and

WHEREAS, KRS 42.014 and KRS 12.270 authorizes the Secretary of the Finance and Administration Cabinet to establish the internal organization and assignment of functions which are not established by statute relating to the Finance and Administration Cabinet; further, KRS Chapter 45A.050 and 45A.230 authorizes the Secretary of the Finance and Administration Cabinet to procure, manage and control all supplies and services that are procured by the Commonwealth and to intervene in controversies among vendors and state agencies; and

NOW, THEREFORE, pursuant to the authority vested in me by KRS 42.014, KRS 12.270, KRS 45A.050, and 45A.230, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

I. Upon the request of an Executive Branch agency, the Finance and Administration Cabinet ("FAC") shall formally review any dispute arising where the agency has requested documents from a private vendor that holds a state contract and the vendor has refused access to said documents under a claim that said documents are not directly pertinent or relevant to the agency's inquiry upon which the document request was predicated.

II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

conduct audits, investigations or any other formal inquiry where a dispute has arisen as to what documents are necessary to conclude the inquiry.

III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.

IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.

V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

Reciprocal preference to be given by public agencies to resident bidders

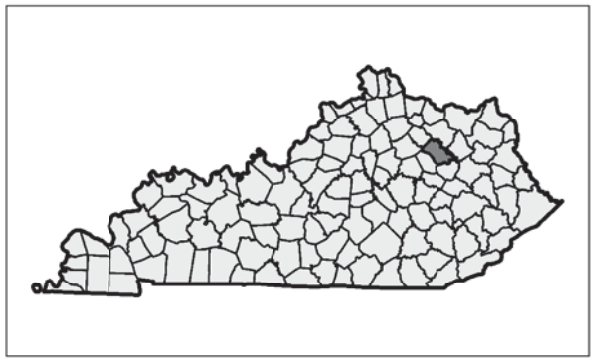
By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the Expedite Bidding Program. Submittal of the Affidavit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

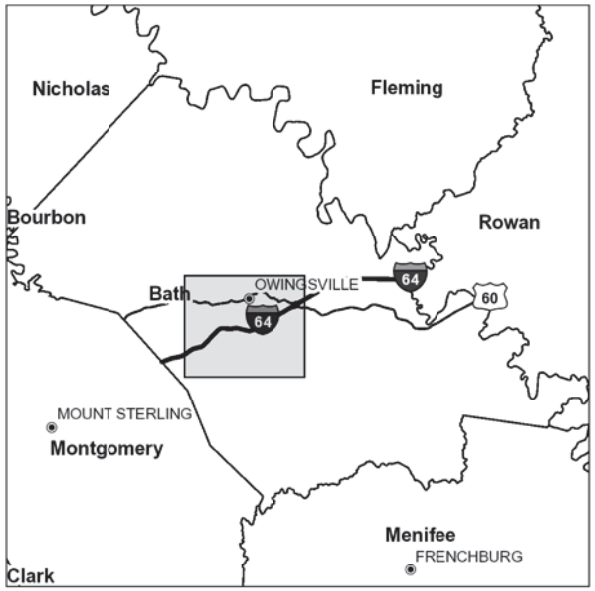
FUEL AND ASPHALT PAY ADJUSTMENT

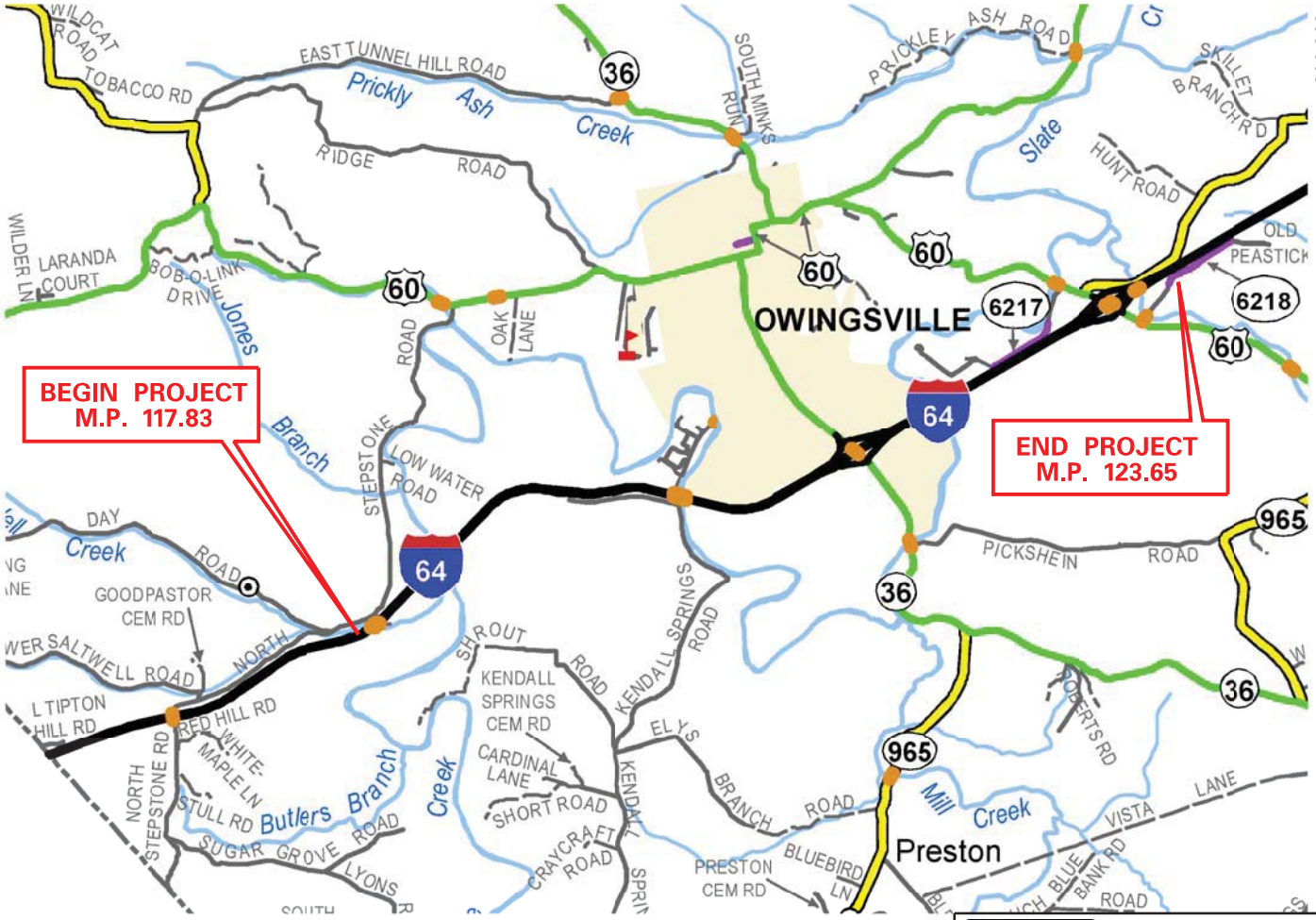
The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of $1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all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

OPTION A

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







CONSTRUCTION NUMBER: FD04 SPP 006 0064 117–124

ITEM NUMBER: 9–2023.00 **LETTING DATE:** OCTOBER 19, 2012

RECOMMENDED BY: _____ **DATE:** _____
Project Manager

PLAN APPROVED BY: _____ **DATE:** _____
State Highway Engineer

FHWA APPROVED BY: _____ **DATE:** _____

HMB PROFESSIONAL ENGINEERS, INC

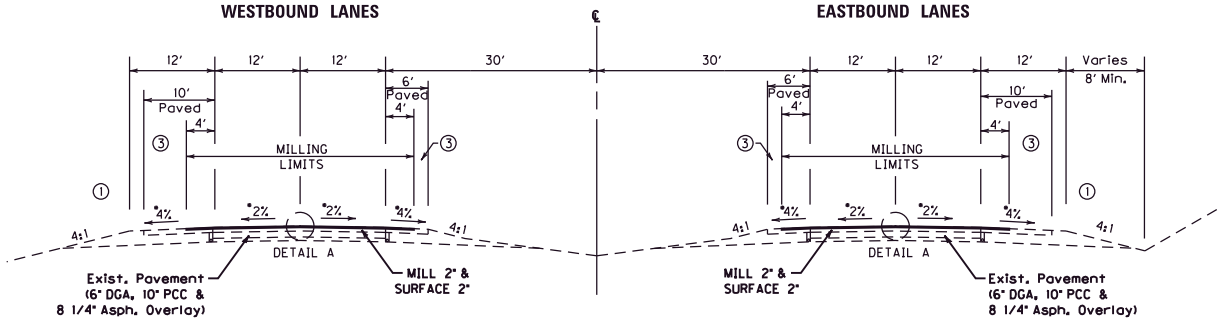
STATE OF KENTUCKY
CLINTON D. YOUNG
25369
LICENSED PROFESSIONAL ENGINEER

Clinton D. Young

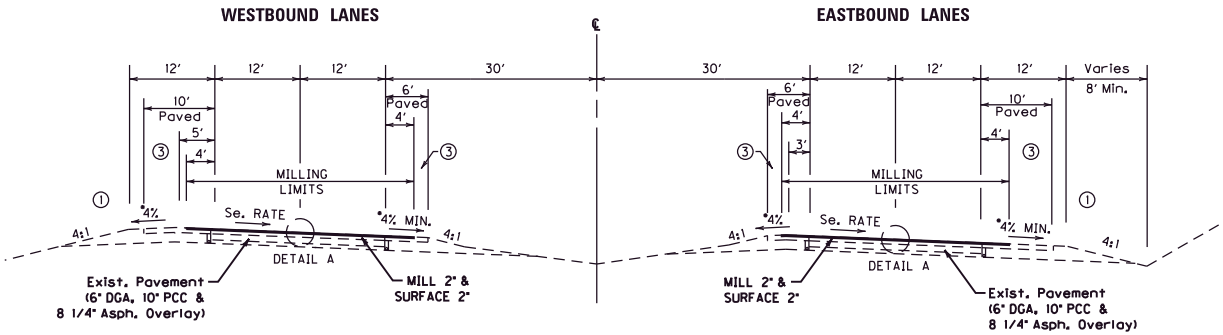
Clinton D. Young
Digitally signed by Clinton D. Young
DN: cn=Clinton D. Young, o=HMB Professional Engineers, Inc., ou, email=cyoung@hmbpe.com, c=US
Date: 2012.10.01 08:53:34 -04'00'

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

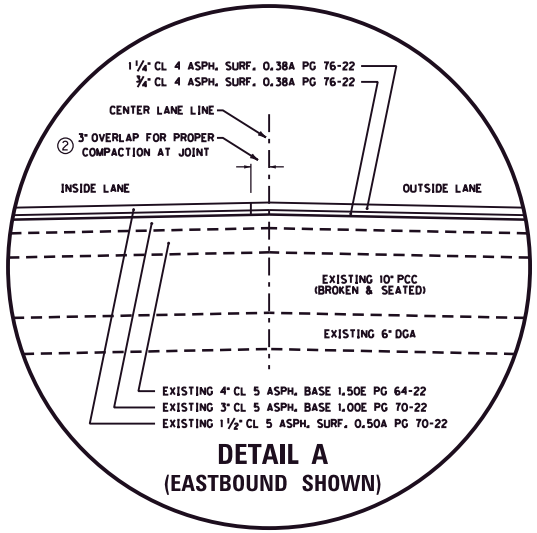
PROPOSED TYPICAL SECTIONS
I–64
MP 117.83 to MP 123.65



MAINLINE NORMAL SECTION



MAINLINE SUPERELEVATED SECTION



DETAIL A
(EASTBOUND SHOWN)

*NOTE: REGARDLESS OF CROSS SLOPES SHOWN, ALL MILLING AND RESURFACING OPERATIONS SHALL MAINTAIN EXISTING CROSS SLOPES ENCOUNTERED DURING CONSTRUCTION.

SURFACING SCHEDULE

MAINLINE TRAFFIC LANES & SHOULDERS

ASPH. PAVE MILLING & TEXTURING ..... 2" DEPTH
CLASS 4 ASPH. SURF. 0.38A PG76-22 ..... 2" DEPTH

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

② PHASE I CONSTRUCTION WILL INCLUDE MILLING AND SURFACING AN ADDITIONAL 3" INTO THE INSIDE DRIVING LANE. THIS MATERIAL WILL BE MILLED AND RESURFACED TO THE CENTER LANE JOINT DURING PHASE II CONSTRUCTION IN ORDER TO ACHIEVE PROPER COMPACTION AT THE CENTER LANE JOINT.

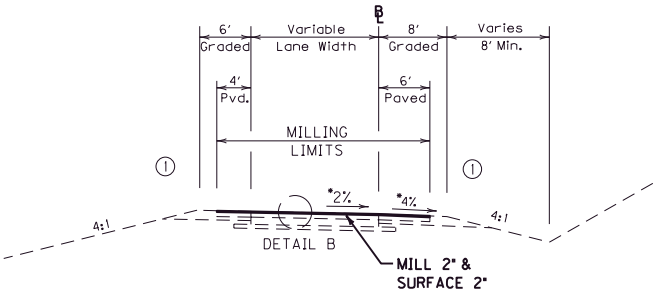
③ ASPHALT SEAL WILL BE REQUIRED ON ALL PAVED SHOULDERS THAT ARE NOT BEING MILLED AND RESURFACED.
TWO APPLICATIONS OF THE FOLLOWING :
ASPHALT SEAL COAT ..... 2.4 lbs. / S.Y.

NOT TO SCALE

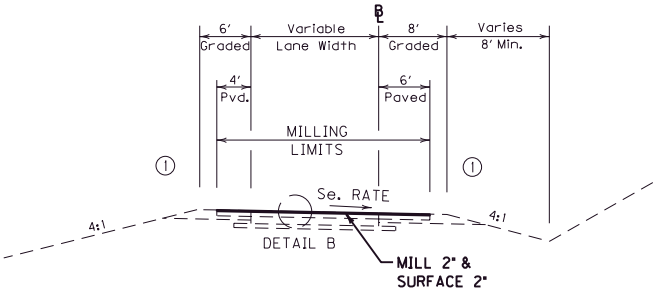
I–64 PROPOSED TYPICAL SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

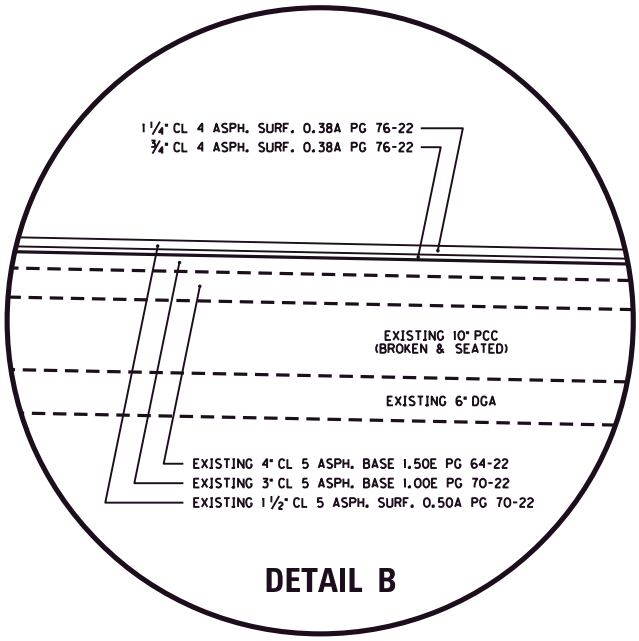
TYPICAL SECTIONS
RAMPS



NORMAL SECTION



SUPERELEVATED SECTION



DETAIL B

*NOTE: REGARDLESS OF CROSS SLOPES SHOWN, ALL MILLING AND RESURFACING OPERATIONS SHALL MAINTAIN EXISTING CROSS SLOPES ENCOUNTERED DURING CONSTRUCTION.

NOTE: ALL RAMPS SHALL BE MILLED AND SURFACED TO THE EXISTING EDGE OF PAVEMENT OF THEIR RESPECTIVE CROSS ROAD.

SURFACING SCHEDULE

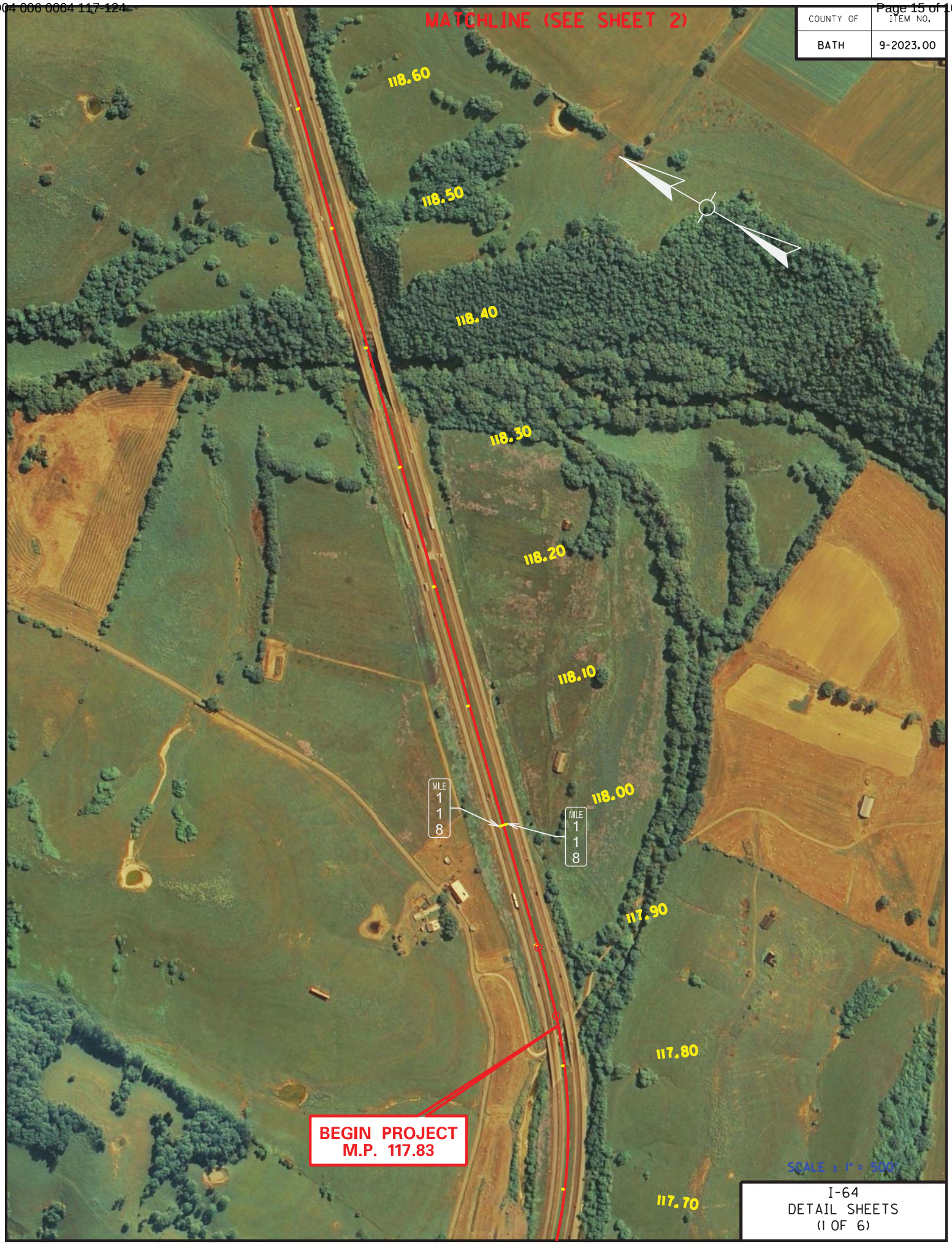
MAINLINE TRAFFIC LANES & SHOULDERS

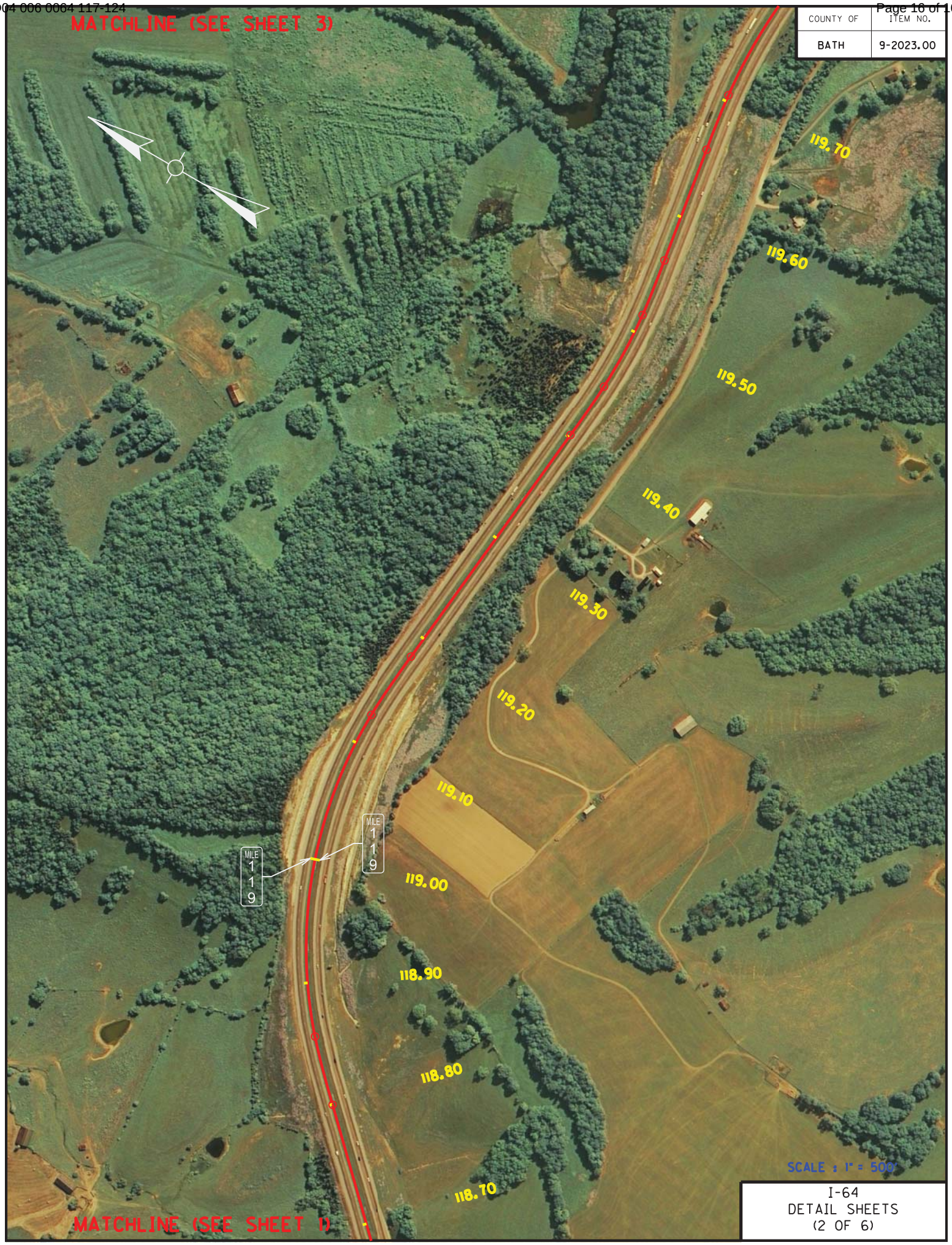
ASPH. PAVE MILLING & TEXTURING ..... 2" DEPTH
CLASS 4 ASPH. SURF. 0.38A PG76-22 ..... 2" DEPTH

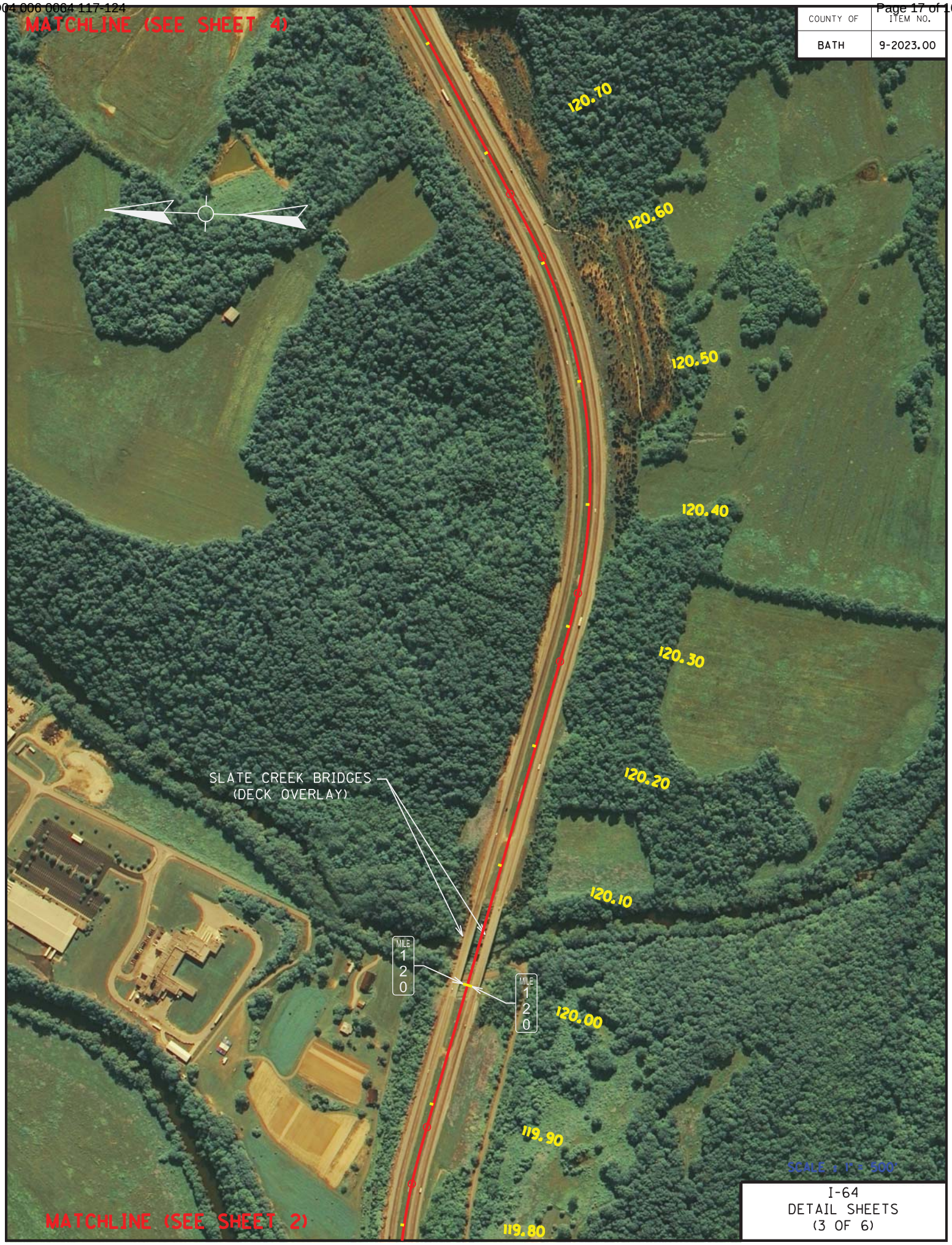
① ASPHALT SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2 FOOT DOWN THE DITCH OR FILL SLOPE.
TWO APPLICATIONS OF THE FOLLOWING :
ASPHALT SEAL COAT..... 2.4 lbs. / S.Y.
ASPHALT SEAL AGGREGATE ..... 20 lbs. / S.Y.

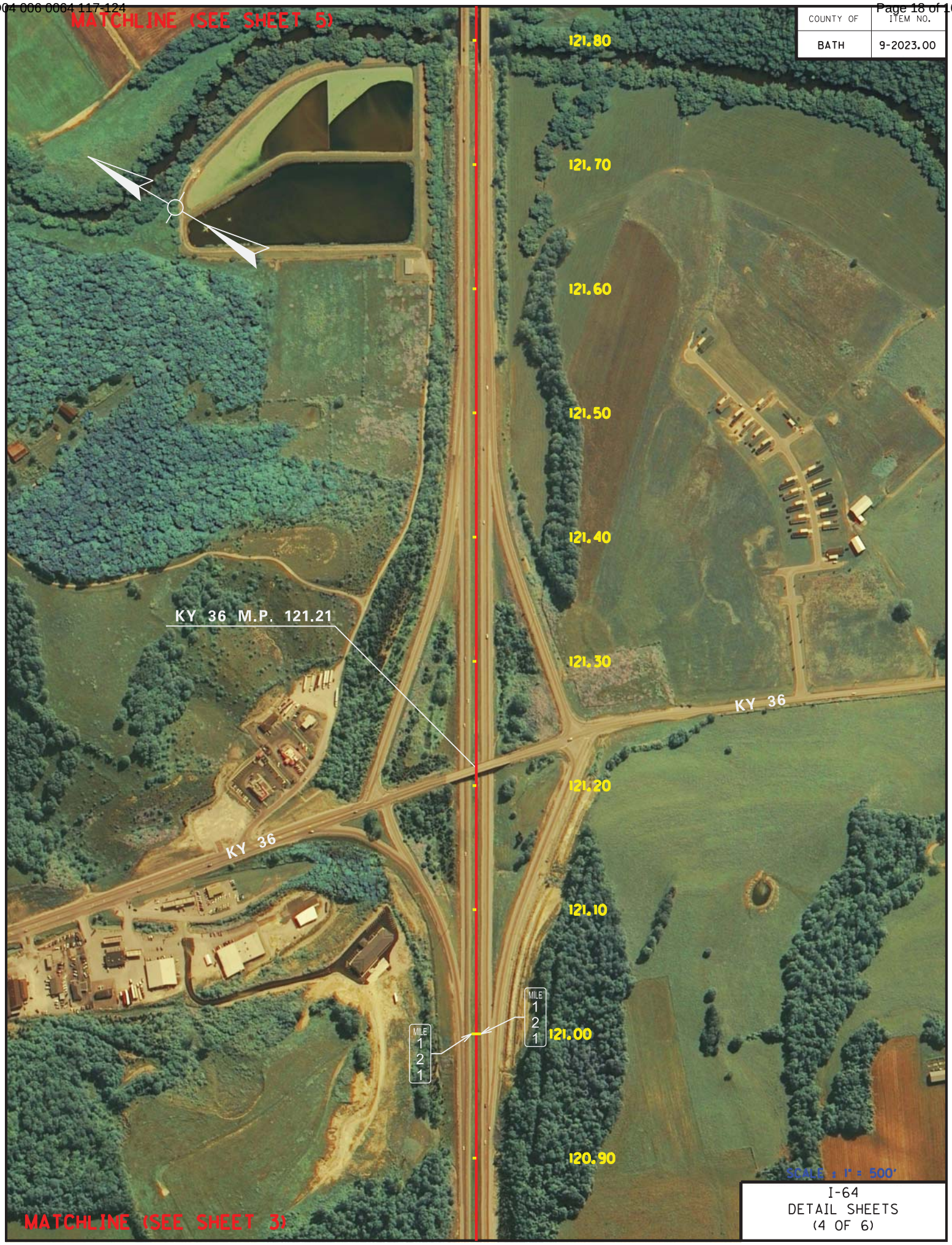
NOT TO SCALE

RAMP TYPICAL SECTIONS


MATCHLINE (SEE SHEET 2)
COUNTY OF
BATH
ITEM NO.
9-2023.00
118.60
118.50
118.40
118.30
118.20
118.10
118.00
117.90
117.80
117.70
MILE 118
MILE 118
BEGIN PROJECT
M.P. 117.83
SCALE : 1" = 500'
I-64
DETAIL SHEETS
(1 OF 6)


MATCHLINE (SEE SHEET 3)
COUNTY OF
BATH
ITEM NO.
9-2023.00
119.70
119.60
119.50
119.40
119.30
119.20
119.10
119.00
118.90
118.80
118.70
MILE 119
MILE 119
SCALE : 1" = 500'
MATCHLINE (SEE SHEET 1)
I-64
DETAIL SHEETS
(2 OF 6)

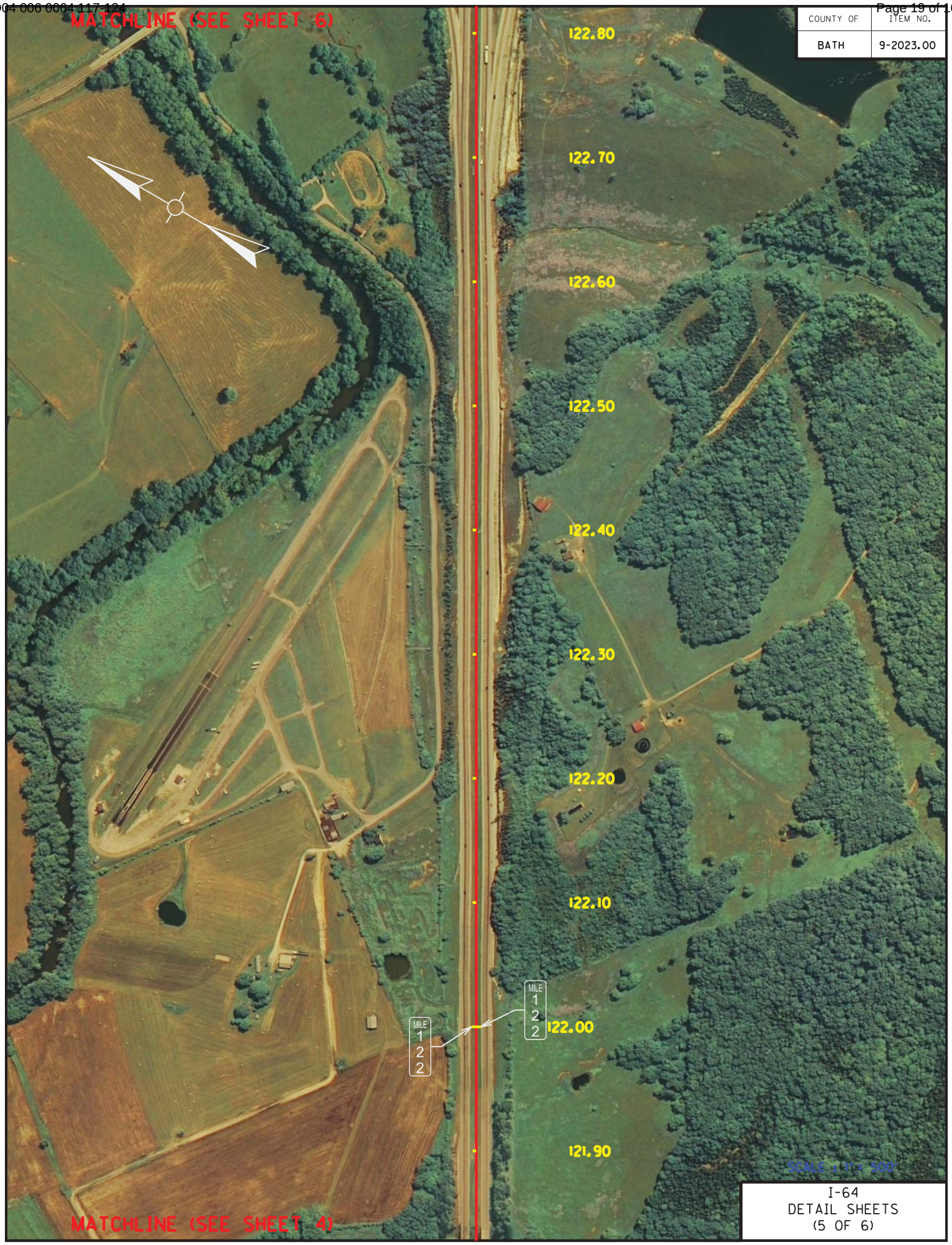

MATCHLINE (SEE SHEET 4)
COUNTY OF
BATH
ITEM NO.
9-2023.00
120.70
120.60
120.50
120.40
120.30
120.20
120.10
120.00
119.90
119.80
SLATE CREEK BRIDGES
(DECK OVERLAY)
MILE
120
MILE
120
SCALE : 1" = 500'
MATCHLINE (SEE SHEET 2)
I-64
DETAIL SHEETS
(3 OF 6)



COUNTY OF	ITEM NO.
BATH	9-2023.00

SCALE : 1" = 500'

I-64
DETAIL SHEETS
(4 OF 6)

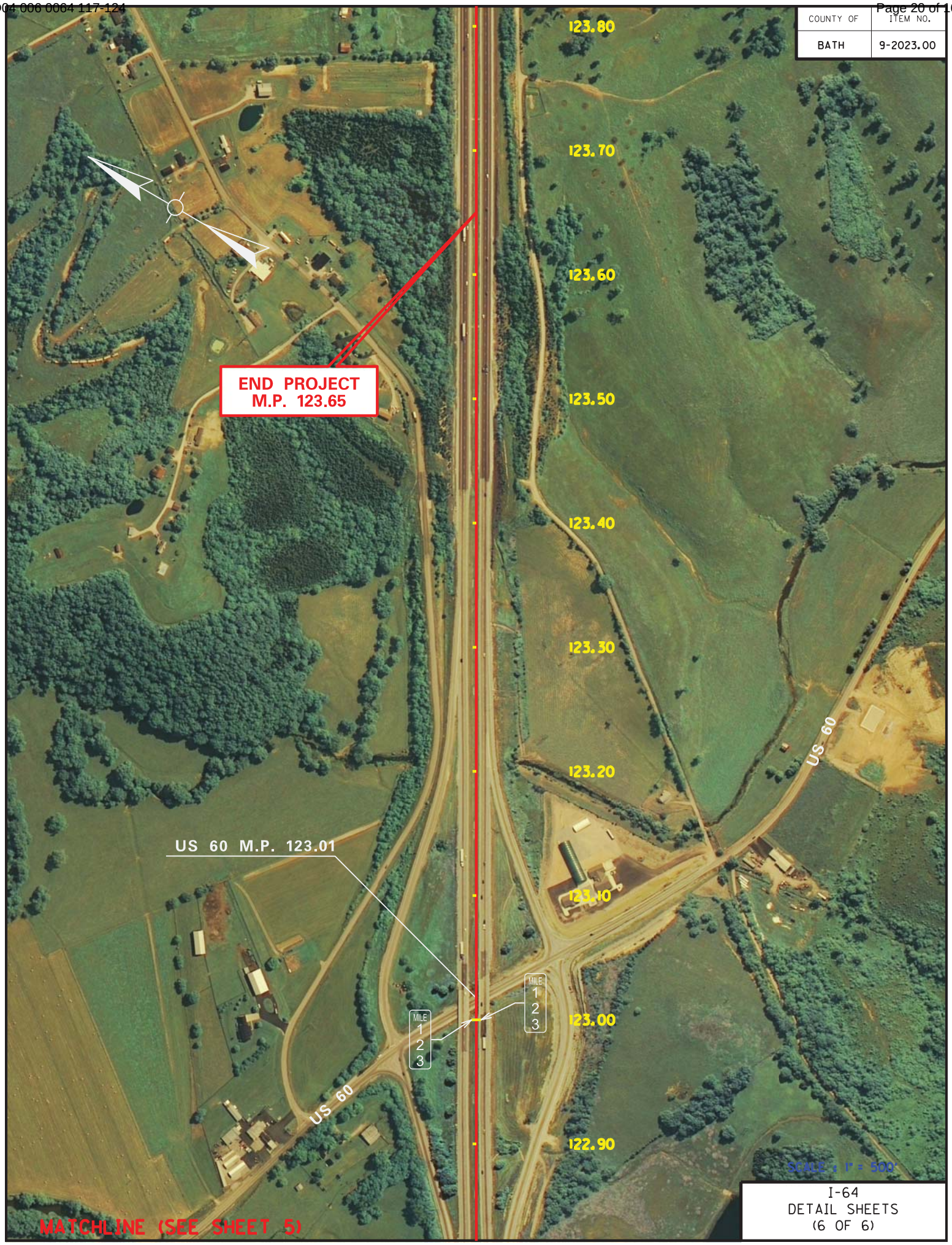


COUNTY OF	ITEM NO.
BATH	9-2023.00

SCALE : 1" = 500'

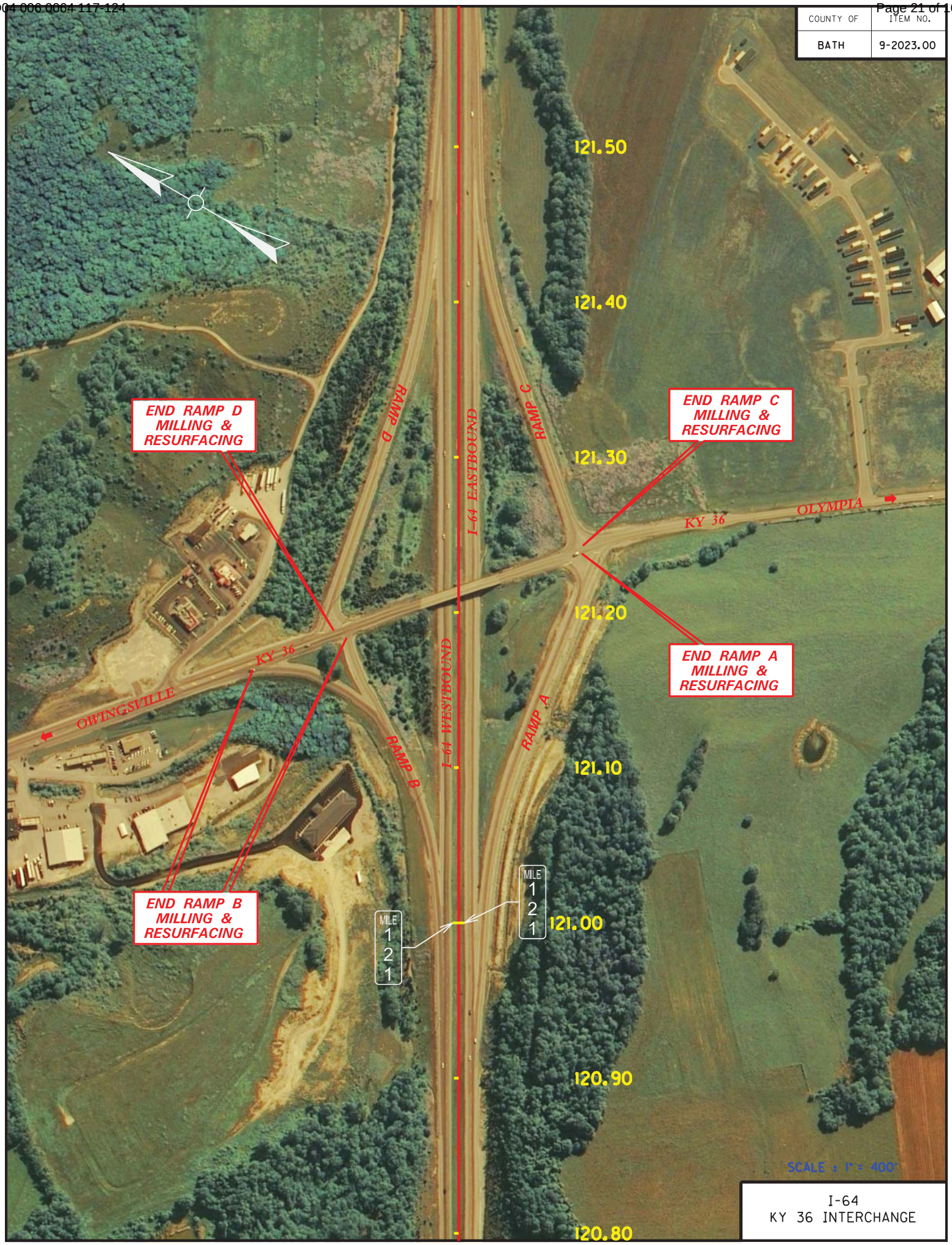
I-64
DETAIL SHEETS
(5 OF 6)

COUNTY OF	ITEM NO.
BATH	9-2023.00

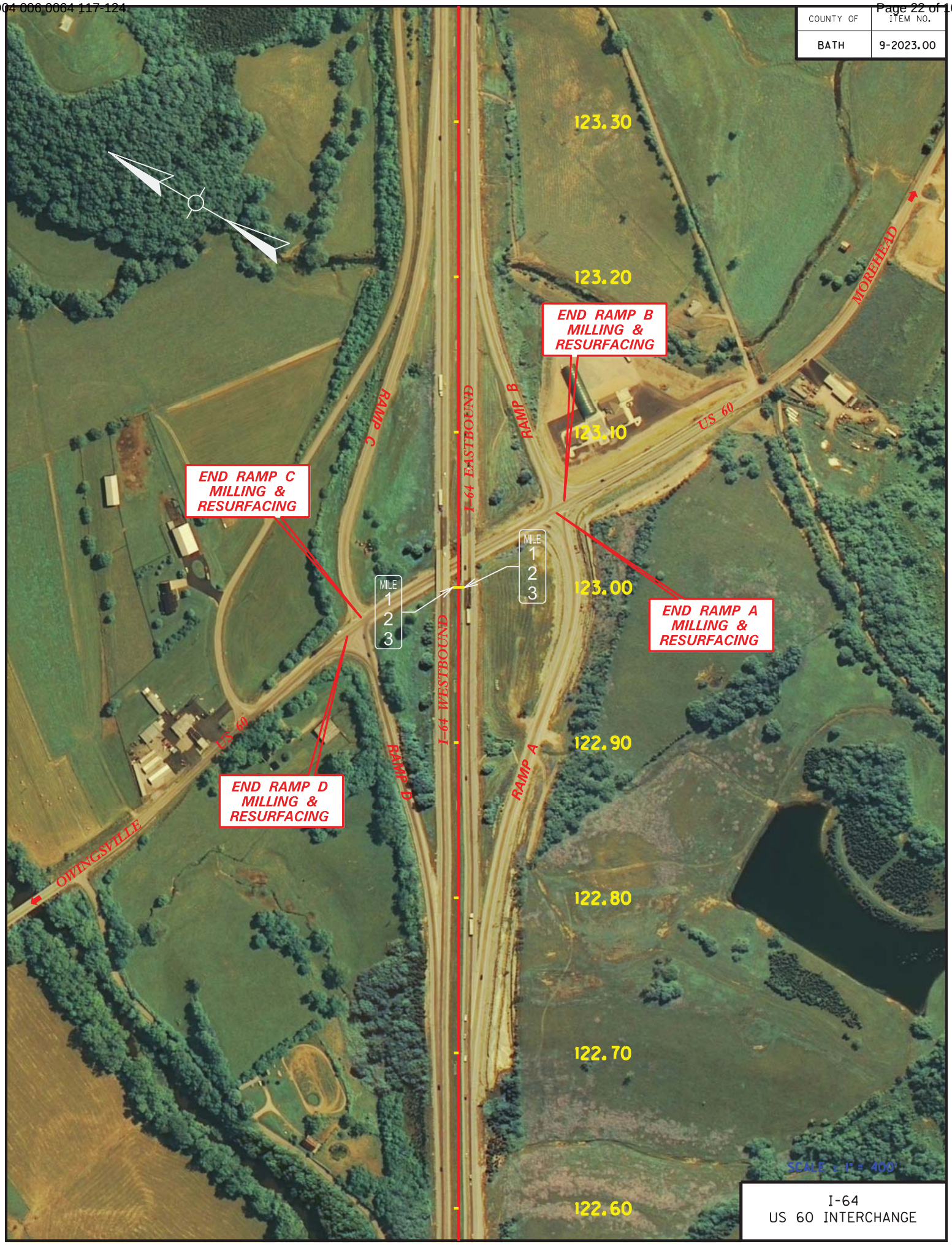


I-64
DETAIL SHEETS
(6 OF 6)

COUNTY OF	ITEM NO.
BATH	9-2023.00



I-64
KY 36 INTERCHANGE


COUNTY OF
BATH
ITEM NO.
9-2023.00
123.30
123.20
123.10
123.00
122.90
122.80
122.70
122.60
END RAMP B MILLING & RESURFACING
END RAMP C MILLING & RESURFACING
END RAMP A MILLING & RESURFACING
END RAMP D MILLING & RESURFACING
RAMP C
RAMP B
RAMP D
RAMP A
I-64 EASTBOUND
I-64 WESTBOUND
US 60
MOREHEAD
OWINGSVILLE
MILE
1
2
3
SCALE : 1" = 400'
I-64
US 60 INTERCHANGE

I-64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9-2023.00
GENERAL SUMMARY

ITEM NUMBER	ITEM	UNIT	QUANTITY
2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH	1
2369	GUARDRAIL END TREATMENT TYPE 2A	EACH	4
2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	6
21802EN	GUARDRAIL - STEEL W BEAM - S FACE (7' POST)	L.F.	6,225
2352	GUARDRAIL - STEEL W BEAM - D FACE (7' POST)	L.F.	237.5
24381EC	GUARDRAIL - STEEL W BEAM - SINGLE FACE (NESTED)	L.F.	80
2381	REMOVE GUARDRAIL	L.F.	4,805
2365	CRASH CUSHION TYPE IX-A	EACH	2
23143ED	KPDES PERMIT & TEMPORARY EROSION CONTROL	L.S.	1
5950	EROSION CONTROL BLANKET	S.Y.	15,000
1982	DELINEATORS FOR GUARDRAIL (MW)	EACH	400
1983	DELINEATORS FOR GUARDRAIL (MY)	EACH	50
1984	DELINEATOR FOR BARRIER - WHITE	EACH	40
6417	FLEXIBLE DELINEATOR POST - W	EACH	317
6418	FLEXIBLE DELINEATOR POST - Y	EACH	83
6592	PAVEMENT MARKING TYPE V - BW/R	EACH	247
6593	PAVEMENT MARKING TYPE V - BY/R	EACH	207
24489EC	INLAID PAVEMENT MARKERS	EACH	1522
2650	MAINTAIN AND CONTROL TRAFFIC	L.S.	1
78	CRUSHED AGGREGATE SIZE NO. 2 ①	TON	11,615
2200	ROADWAY EXCAVATION	C.Y.	3,936
2599	FABRIC-GEOTEXTILE TYPE IV	S.Y.	1,346
2483	CLASS II CHANNEL LINING	TON	3,452
2484	CLASS III CHANNEL LINING	TON	900
6412	STEEL POST MILE MARKERS	EACH	12
2562	SIGNS	S.F.	744
2575	DITCHING AND SHOULDERING	L.F.	30,730
3383	PVC - 4 IN	L.F.	30
1028	PERF PIPE HEADWALL TY 3-4 IN	EACH	5
1490	DROP BOX INLET TYPE 1	EACH	1
2165	REMOVED PAVED DITCH	S.Y.	236
3240	BASE FAILURE REPAIR ②	S.Y.	1,001

① TO BE USED, BUT NOT LIMITED TO: SLIDE REPAIR, PIPE EROSION, WASHOUT REPAIR BEHIND GUARDRAIL, PERF. PIPE HDWL'S, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

② INCLUDES 200 S.Y. TO BE USED AS DIRECTED BY THE ENGINEER.

③ CARRIED OVER FROM PAVING SUMMARY

④ FOR CRASH CUSHION AT MEDIAN PIERS

⑤ TO INCLUDE EARTHWORK FOR CORRECTING MEDIAN

⑥ INCLUDES 23.9 TONS OF ITEM 100 AND 2.87 OF ITEM 103 FROM FORESLOPE REPAIR DETAIL

I-64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9-2023.00
GENERAL SUMMARY

ITEM NUMBER	ITEM	UNIT	QUANTITY
2775	ARROW PANEL	EACH	2
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	8
2677	ASPHALT PAVEMENT MILLING & TEXTURING ③	TON	27,938
2676	MOBILIZATION FOR MILLING & TEXTURING	L.S.	1
8100	CONCRETE-CLASS A ④	C.Y.	24.77
71	CRUSHED AGGREGATE SIZE NO. 57 ④	TON	53
8150	STEEL REINFORCEMENT ④	LB	392
2929	CRASH CUSHION TYPE IX ⑤	EACH	2
24191ER	DURABLE WATERBOURNE MARKING - 12" W	L.F.	5,135
24189ER	DURABLE WATERBOURNE MARKING - 6" W	L.F.	85,094
24190ER	DURABLE WATERBOURNE MARKING - 6" Y	L.F.	69,777
6567	PAVE MARKING - THERMO STOP BAR - 12 IN	L.F.	120
6511	PAVEMENT STRIPING TEMPORARY PAINT - 6"	L.F.	5,000
2268	REMOVE & REPLACE FENCE (WOVEN WIRE TYPE 1)	L.F.	65,700
1825	ISLAND CURB AND GUTTER	L.F.	10
----	SPECIAL CONCRETE HEADER CURB	L.F.	3,150
1691	FLUME INLET TYPE 2	EACH	6
2696	SHOULDER RUMBLE STRIPS - SAWED ③	LIN. FT.	141,438
20071EC	JOINT ADHESIVE	L.F.	61,460
3171	CONCRETE BARRIER WALL TYPE 9T	L.F.	1,400
2003	RELOCATE TEMPORARY CONCRETE BARRIER	L.F.	1,400
23979EC	CRASH CUSHION TYPE VI CLASS C TL3	EACH	2
2898	RELOCATE CRASH CUSHION	EACH	2
04793	CONDUIT 1-1/4 INCH	LIN. FT.	50
04795	CONDUIT 2 INCH	LIN. FT.	20
04820	TRENCHING AND BACKFILLING	LIN. FT.	60
04829	PIEZOELECTRIC SENSOR	EACH	4
04830	LOOP WIRE	LIN. FT.	1,500
04895	LOOP SAW SLOT AND FILL	LIN. FT.	365
20359NN	GALV. STEEL CABINET	EACH	2

① TO BE USED, BUT NOT LIMITED TO: SLIDE REPAIR, PIPE EROSION, WASHOUT REPAIR BEHIND GUARDRAIL, PERF. PIPE HDWL'S, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

② INCLUDES 200 S.Y. TO BE USED AS DIRECTED BY THE ENGINEER.

③ CARRIED OVER FROM PAVING SUMMARY

④ FOR CRASH CUSHION AT MEDIAN PIERS

⑤ TO INCLUDE EARTHWORK FOR CORRECTING MEDIAN

⑥ INCLUDES 23.9 TONS OF ITEM 100 AND 2.87 OF ITEM 103 FROM FORESLOPE REPAIR DETAIL

I-64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9-2023.00
GENERAL SUMMARY

ITEM NUMBER	ITEM	UNIT	QUANTITY
20360ES818	WOOD POST	EACH	4
20391NS835	JUNCTION BOX TYPE A	EACH	2
24094EC	PARTIAL DEPTH PATCHING	C.Y.	22
08510	REM. EPOXY BIT. FORIGN OVERLAY	S.Y.	2,431
08526	CONC. CLASS "M" FULL DEPTH PATCH	C.Y.	12
08534	CONCRETE OVERLAY-LATEX	C.Y.	101.3
08549	BLAST CLEANING	S.Y.	2,467
02347	WATER GATE TYPE 1	EACH	3
1	DGA BASE ③	TON	3,822
342	CLASS 4 ASPHALT SURFACE 0.38A PG76-22 ③	TON	28,015
100	ASPHALT SEAL AGGREGATE ③ ⑥	TON	743
103	ASPHALT SEAL COAT ③ ⑥	TON	210
217	CLASS 4 ASPHALT BASE 1.0D PG64-22 ③	TON	424
10020NS	FUEL ADJUSTMENT	DOLLAR	37,560
10030NS	ASPHALT ADJUSTMENT	DOLLAR	66,189
2568	MOBILIZATION	L.S.	1
2569	DEMOBILIZATION	L.S.	1

① TO BE USED, BUT NOT LIMITED TO: SLIDE REPAIR, PIPE EROSION, WASHOUT REPAIR BEHIND GUARDRAIL, PERF. PIPE HDWL'S, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

② INCLUDES 200 S.Y. TO BE USED AS DIRECTED BY THE ENGINEER.

③ CARRIED OVER FROM PAVING SUMMARY

④ FOR CRASH CUSHION AT MEDIAN PIERS

⑤ TO INCLUDE EARTHWORK FOR CORRECTING MEDIAN

⑥ INCLUDES 23.9 TONS OF ITEM 100 AND 2.87 OF ITEM 103 FROM FORESLOPE REPAIR DETAIL

I–64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9–2023.00
PAVING SUMMARY

PAVING AREAS	
ITEM	TOTAL
DRIVING LANES, INSIDE & OUTSIDE SHOULDERS	S.Y.
I–64:	
2" CL4 ASPH SURF 0.38A PG76-22	218,218
ASPHALT SEAL COAT (2 APPLICATIONS)	52,410
ASPHALT SEAL AGGREGATE (2 APPLICATIONS)	52,410
ASPHALT PAVE MILLING & TEXTURING	S.Y.
I-64 & RAMPS (2")	253,872
SHOULDER REPAIR w/ SPEC. CONC. HEADER CURB AREAS	1,673
SLIDE REPAIR AREA	100
SHOULDER REPAIR w/ SPEC. CONC. HEADER CURB AREAS	S.Y.
2" CL4 ASPH SURF 0.38A PG76-22	2,373
6.25" CL4 ASPH BASE 1.0D PG64-22	700
SHOULDER DIGOUTS FOR M.O.T. AT BRIDGES	S.Y.
6" DGA	533
6" CL4 ASPH BASE 1.0D PG64-22	533

PAVING AREAS	
ITEM	TOTAL
DRIVING LANES, INSIDE & OUTSIDE SHOULDERS	
KY 36 RAMPS:	
2" CL4 ASPH SURF 0.38A PG76-22	16,825
ASPHALT SEAL COAT (2 APPLICATIONS)	9,046
ASPHALT SEAL AGGREGATE (2 APPLICATIONS)	9,046
US 60 RAMPS:	
2" CL4 ASPH SURF 0.38A PG76-22	17,156
ASPHALT SEAL COAT (2 APPLICATIONS)	8,854
ASPHALT SEAL AGGREGATE (2 APPLICATIONS)	8,854
ASPHALT SEAL COAT FOR UNMILLED PAVED SHOULDERS	S.Y.
ASPHALT SEAL COAT (2 APPLICATIONS)	100,626
DGA WEDGE AT SHOULDER DROP-OFF	S.Y.
DGA (1" AVG DEPTH)	61,760
SLIDE REPAIR AREA	S.Y.
2" CL4 ASPH SURF 0.38A PG76-22	100

PAVING SUMMARY

CODE	ITEM	UNITS	PROJECT TOTAL
1	DGA BASE (1)	TON	3,822
342	CLASS 4 ASPHALT SURFACE 0.38A PG76-22	TON	28,015
217	CLASS 4 ASPHALT BASE 1.0D PG64-22	TON	424
2677	ASPHALT PAVEMENT MILLING & TEXTURING	TON	27,938
2696	SHOULDER RUMBLE STRIPS - SAWED	LF	141,438
100	ASPHALT SEAL AGGREGATE (2)	TON	703
103	ASPHALT SEAL COAT (3)	TON	205

ALL QUANTITIES HAVE BEEN CARRIED OVER AND INCLUDED IN THE GENERAL SUMMARY

(1) INCLUDES 250 TONS TO BE USED FOR EMBANKMENT CONSTRUCTION AT PROPOSED GUARDRAIL END TREATMENTS AS DIRECTED BY THE ENGINEER

(2) ESTIMATED AT 20 LBS/S.Y. FOR ENTIRE AREA (ONE APPLICATION)

(3) ESTIMATED AT 2.4 LBS/S.Y. FOR ENTIRE AREA (ONE APPLICATION)

I–64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9–2023.00
EASTBOUND GUARDRAIL SUMMARY

SHOT NUMBER (1)	MILEPOST	GUARDRAIL–STEEL W BEAM–S FACE (7 FT POST) (LF)	GUARDRAIL–STEEL W BEAM–D FACE (LF)	GUARDRAIL–STEEL W BEAM–S FACE (NESTED) (7 FT POST) (LF)	GUARDRAIL CONNECTOR TO BRIDGE END TY A (EACH)	GUARDRAIL END TREATMENT TYPE 2A (EACH)	GUARDRAIL END TREATMENT TYPE 4A (EACH)	REMOVE GUARDRAIL	CRASH CUSHION TYPE IX–A (EACH)	DESCRIPTION
ITEM NO.		21802EN	2352	24381EC	2363	2369	2391	2381	2365	
607	117.89	12.5						12.5		REPLACE DAMAGED SECTION
611	117.94	12.5						12.5		REPLACE DAMAGED SECTION
612	117.96	125				1				EXTEND AND CONSTRUCT NEW END TREATMENT
627	118.27	150					1			EXTEND AND CONSTRUCT NEW END TREATMENT
629-631	118.32		37.5					37.5		REPLACE DAMAGED D-FACE GR IN MEDIAN (WB?)
633-634	118.34	50						50		REPLACE DAMAGED SECTION
648-649	118.60	37.5						37.5		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
723-739	119.90	500			1		1	500		REPLACE GR W/ NEW END TREATMENT & BRIDGE END CONN.
732-733	119.98	25						25		REPLACE DAMAGED SECTION
752	120.19	225				1				EXTEND AND CONSTRUCT NEW END TREATMENT
758-759	120.37	37.5						37.5		REPLACE DAMAGED SECTION
787	121.10	450					1			EXTEND AND CONSTRUCT NEW END TREATMENT
	121.21			40				40		REMOVE EXISTING GR AND REPLACE WITH NESTED GR AT PIER
792-793	121.22	62.5						62.5		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
820-821	121.74		37.5					37.5		REPLACE DAMAGED SECTION
841	121.93	100				1				EXTEND AND CONSTRUCT NEW END TREATMENT
863	122.52	12.5						12.5		REPLACE DAMAGED SECTION
865	122.56	12.5						12.5		REPLACE DAMAGED SECTION
869-870	122.61	25						25		REPLACE DAMAGED SECTION
907-908	123.27	50						50		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
915	123.39	125				1				EXTEND AND CONSTRUCT NEW END TREATMENT
SHT. TOTAL		2012.5	75	40	1	4	3	952.5	0	

(1) SHOT NUMBER REFERS TO SURVEY SHOT NUMBER, THESE SHOT NUMBERS HAVE BEEN MARKED IN THE FIELD WITH PAINT.

I-64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9-2023.00
WESTBOUND GUARDRAIL SUMMARY

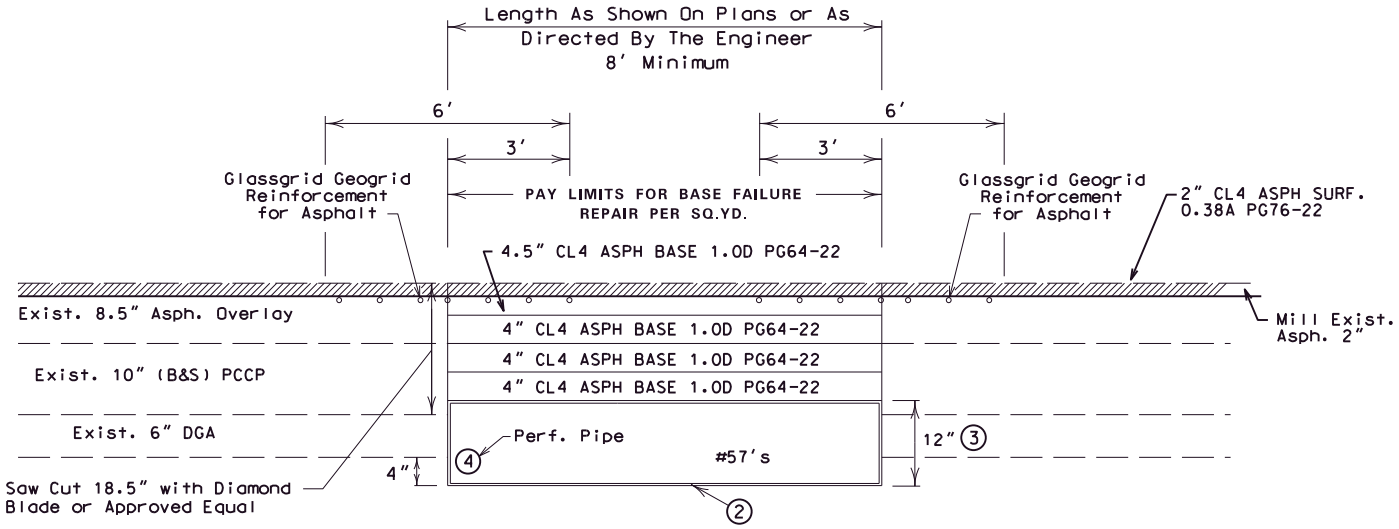
SHOT NUMBER (1)	FROM MILEPOST	GUARDRAIL-STEEL W BEAM-S FACE (7 FT POST) (LF)	GUARDRAIL-STEEL W BEAM-D FACE (LF)	GUARDRAIL-STEEL W BEAM-S FACE (NESTED) (7 FT POST) (LF)	GUARDRAIL CONNECTOR TO BRIDGE END TY A (EACH)	GUARDRAIL END TREATMENT TYPE 2A (EACH)	GUARDRAIL END TREATMENT TYPE 4A (EACH)	REMOVE GUARDRAIL	CRASH CUSHION TYPE IX-A (EACH)	DESCRIPTION
ITEM NO.		21802EN	2352	24381EC	2363	2369	2391	2381	2365	
106	117.86	150					1			EXTEND AND CONSTRUCT NEW END TREATMENT
108	117.89								1	REPLACE DAMAGED CRASH CUSHION
129-130	118.31		37.5					37.5		REPLACE DAMAGED SECTION
132-133	118.32	25						25		REPLACE DAMAGED SECTION
147-148	118.44		37.5					37.5		REPLACE DAMAGED SECTION
149-150	118.46		25					25		REPLACE DAMAGED SECTION
153	118.50	50						50		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
	118.70	1200						1200		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
	119.13	650						650		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
190	119.67	25						25		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
198	119.95	12.5						12.5		REPLACE DAMAGED SECTION
199	119.97	37.5						37.5		REPLACE DAMAGED SECTION
354	120.11		62.5						1	CONSTRUCT MISSING GR AND CRASH CUSHION
212	120.19	50						50		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
	120.35	1300						1300		REMOVE AND CONSTRUCT NEW GR FOR SHOULDER REPAIR
240	121.11	25						25		REPLACE DAMAGED SECTION
	121.21			40				40		REMOVE EXISTING GR AND REPLACE WITH NESTED GR AT PIER
249	121.23	12.5						12.5		REPLACE DAMAGED SECTION
256	121.37	12.5						12.5		REPLACE DAMAGED SECTION
257	121.39	150					1			EXTEND AND CONSTRUCT NEW END TREATMENT
261	121.47	12.5						12.5		REPLACE DAMAGED SECTION
283-284	191.97	25						25		REPLACE DAMAGED SECTION
288	122.00	200					1			EXTEND AND CONSTRUCT END TRARTMENT
308-309	122.84	50						50		REPLACE DAMAGED SECTION
310-311	122.91	25						25		REPLACE DAMAGED SECTION
314-315	122.95	25						25		REPLACE DAMAGED SECTION
344-345	123.56	25						25		REPLACE DAMAGED SECTION
	123.62	150						150		REMOVE AND CONSTRUCT NEW GR FOR SLIDE REPAIR
SHT. TOTAL		4212.5	162.5	40	0	0	3	3852.5	2	
PROJ. TOTAL		6225	237.5	80	1	4	6	4805	2	

(1) SHOT NUMBER REFERS TO SURVEY SHOT NUMBER, THESE SHOT NUMBERS HAVE BEEN MARKED IN THE FIELD WITH PAINT.

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

I–64
BASE FAILURE REPAIR

M.P. / DIRECTION	PT. #	S.Y.
117.85 EB	605, 606	289
118.46 EB	475,476	332
120.70 EB	794,795	43
122.98 WB	316	29
123.04 EB	896	36
123.45 EB	922	72
TOTAL		801



BASE FAILURE REPAIR PROFILE DETAIL

NOTE FOR BASE FAILURE REPAIR DETAIL

(1) "BASE FAILURE" locations are shown above by Mile Point. The Engineer shall make the final determination as to the width and the exact location of the Base Failure.
Locations shown may be modified or eliminated by the Engineer.
Before removal of the existing material, saw cuts shall be made no closer than 4 feet to an existing joint. If existing adjacent joints are not apparent due to reflective cracking, the Engineer will determine the actual location of the sawed joint.

After all existing material has been removed to the dimensions shown, each course or backfill material shall be compacted to the proper density for the material being placed as required in the Standard Specifications. The 4" perforated pipe shall not be wrapped and only coarse aggregate shall be used.

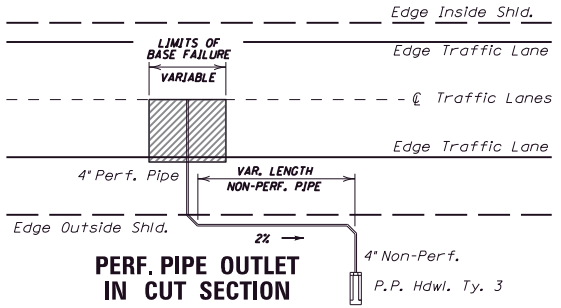
The Contractor shall allow 2 weeks minimum between completion of the Base Failure Repair and the milling and paving operations to allow for settlement.

The contract unit bid price per SQ YD for "Base Failure Repair" shall include saw cutting through the asphalt and B&S PCC Pavement, removing pavement, roadway excavation, perforated pipe-4 inch, perforated pipe headwalls, crushed aggregate size no. 57, CL4 asphalt base CL.3 1.00D PG 64-22, glassgrid geogrid reinforcement for asphalt, fabric-geotextile type IV, and all incidentals necessary to complete the installation as detailed.

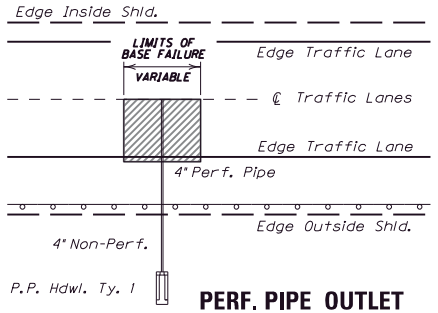
(2) Fabric-Geotextile Type IV required around coarse aggregate.

(3) The repair shall extend 1 FOOT beyond the edge of pavement or as directed by the Engineer.

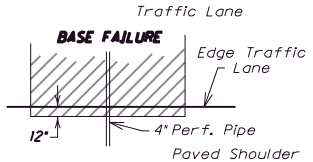
(4) Place the Perforated Pipe at the low point of the digout.



PERF. PIPE OUTLET IN CUT SECTION



PERF. PIPE OUTLET w/GUARDRAIL



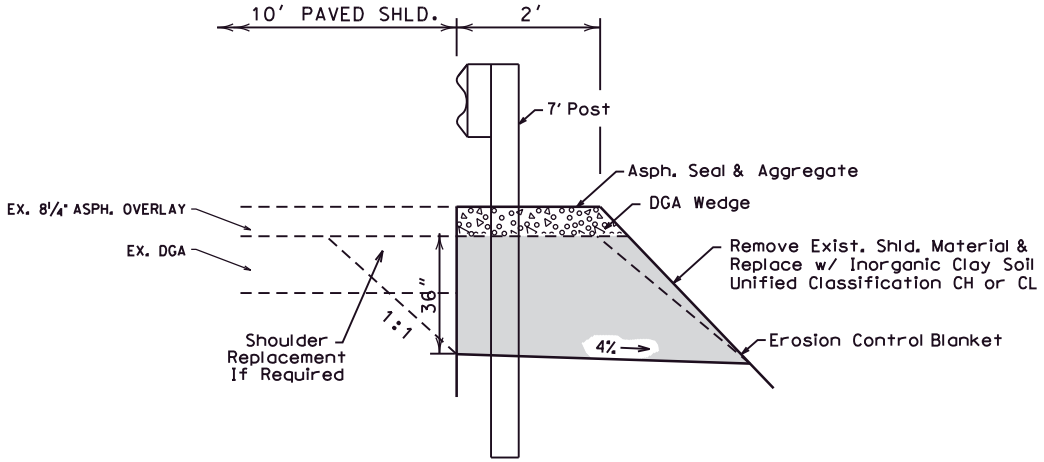
BASE FAILURE DETAIL

NOT TO SCALE

I–64
BASE FAILURE REPAIR

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

SHOULDER REPAIR DETAIL
I–64



SHOULDER REPAIR DETAIL

SHOULDER REPAIR AREAS		
PT. NO.	*LOCATION*	*L.F.*
	EASTBOUND	
648–649	MP 118.60	30
792–793	MP 121.22	60
907–908	MP 123.27	40
	WESTBOUND	
153	MP 118.50	40
190	MP 119.67	25
212	MP 120.19	50
222	MP 120.50	30
	TOTAL	275 *

** REMOVE 312.5' OF GUARDRAIL (CARRIED ON GUARDRAIL SUMMARY)*

SHOULDER REPAIR NOTE :

ITEMS SHOWN ARE INCLUDED IN THE BID ITEM "DITCHING AND SHOULDERING". SHOULDER REPAIR INCLUDES REMOVING THE EXISTING SHOULDER TO THE DEPTH SPECIFIED OR AS DIRECTED BY THE ENGINEER AND BACKFILLING WITH COMPACTED SOIL. COMPACT SOIL IN 6" LIFTS. EXCAVATED MATERIAL MAY BE WASTED WITHIN THE RIGHT OF WAY IN AREAS DESIGNATED BY THE ENGINEER.

* REMOVE EXISTING PAVED SHOULDER AS DIRECTED BY THE ENGINEER AND REPLACE w/ SOIL BACKFILL, 4" DGA BASE & 5" CL4 AB 1.0D PG64-22. PAYMENT WILL BE MADE PER UNIT BID PRICE FOR DGA AND ASPHALT BASE.

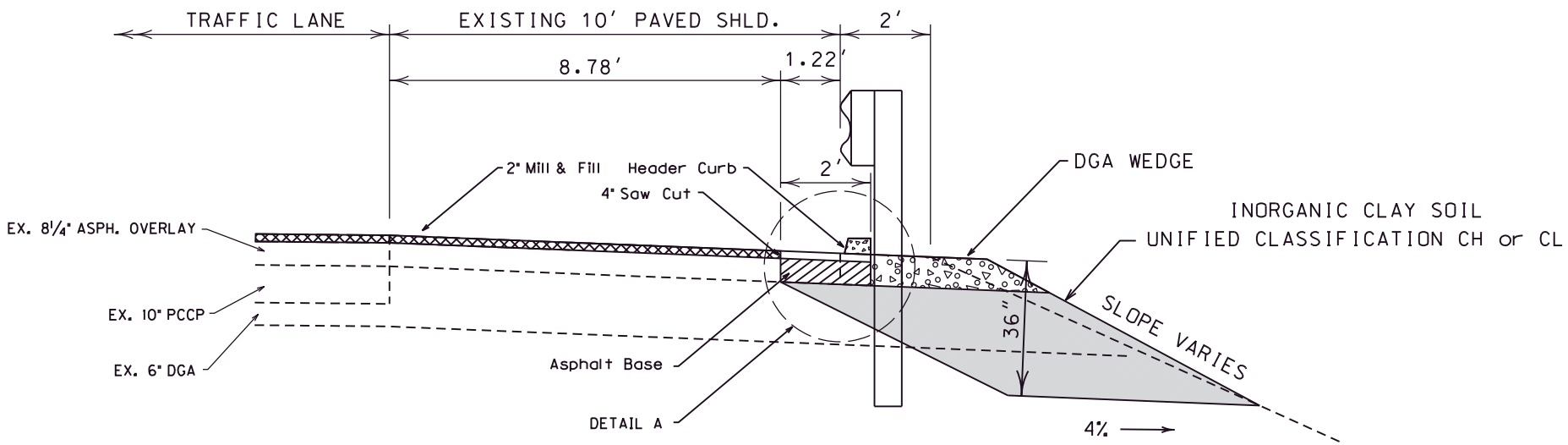
THE INTENT OF THE SHOULDER REPAIR CONSTRUCTION IS TO BE DONE JUST PRIOR TO THE MILLING AND ASPHALT OVERLAY CONSTRUCTION PHASE. IF PROPOSED GUARDRAIL CAN NOT BE COMPLETED IN ONE PERIOD FROM SUNDAY TO FRIDAY SHOULDER CLOSURES WITH BARRELS SHALL BE INSTALLED. TEMPORARY BARRIER WALLS OR TEMPORARY GUARDRAIL SHALL BE REQUIRED AFTER A TWO WEEK PERIOD OF SHOULDER CLOSURES WITH BARRELS.

NOT TO SCALE

I–64
SHOULDER REPAIR DETAIL

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

SHOULDER REPAIR DETAIL
w/ SPECIAL CONCRETE HEADER CURB
I–64



SHOULDER REPAIR w/ SPECIAL CONCRETE HEADER CURB AREAS

LOCATION (WESTBOUND)	LENGTH (L.F.)	FLUME INLET TY 2	*REMOVE GR (L.F.)	SPEC. CONC. HEADER CURB (L.F)
MP 118.70 to MP 118.93	1200	2	1200	1200
MP 119.13 to MP 119.25	650	2	650	650
MP 120.35 to MP 120.59	1300	2	1300	1300
TOTAL	3150	6	3150	3150

* (CARRIED ON GUARDRAIL SUMMARY)

SHOULDER REPAIR w/ SPECIAL CONCRETE HEADER CURB NOTE :

ITEMS SHOWN ARE INCLUDED IN THE BID ITEM "DITCHING AND SHOULDERING". SHOULDER REPAIR INCLUDES REMOVING THE EXISTING SHOULDER TO THE DEPTH SPECIFIED OR AS DIRECTED BY THE ENGINEER AND BACKFILLING WITH COMPACTED SOIL. COMPACT SOIL IN 6" LIFTS. EXCAVATED MATERIAL MAY BE WASTED WITHIN THE RIGHT OF WAY IN AREAS DESIGNATED BY THE ENGINEER.

PAYMENT FOR GUARDRAIL REPLACEMENT, SPECIAL CONCRETE HEADER CURB, DGA AND ASPHALT BASE WILL BE MADE PER UNIT BID PRICE.

THE INTENT OF THE SHOULDER REPAIR CONSTRUCTION IS TO BE DONE JUST PRIOR TO THE MILLING AND ASPHALT OVERLAY CONSTRUCTION PHASE. IF PROPOSED GUARDRAIL CAN NOT BE COMPLETED IN ONE PERIOD FROM SUNDAY TO FRIDAY SHOULDER CLOSURES WITH BARRELS SHALL BE INSTALLED. TEMPORARY BARRIER WALLS OR TEMPORARY GUARDRAIL SHALL BE REQUIRED AFTER A TWO WEEK PERIOD OF SHOULDER CLOSURES WITH BARRELS.

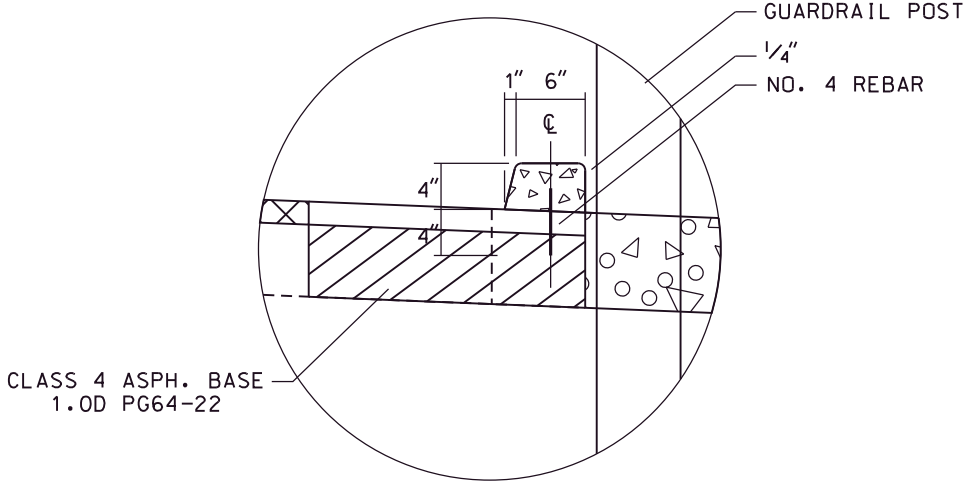
NOT TO SCALE

I–64
SHOULDER REPAIR DETAIL

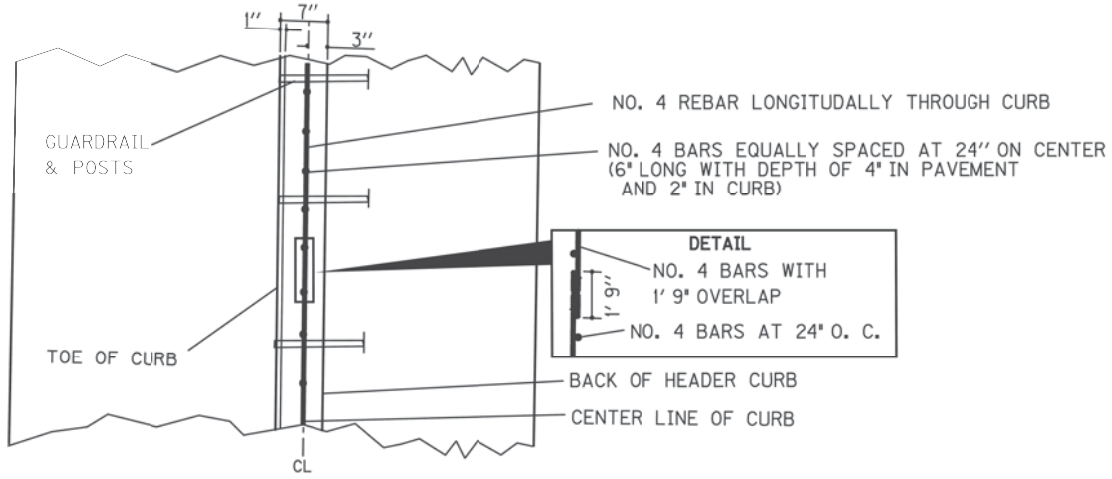
COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

SHOULDER REPAIR DETAIL
w/ SPECIAL CONCRETE HEADER CURB
I–64

DETAIL A



PLAN VIEW

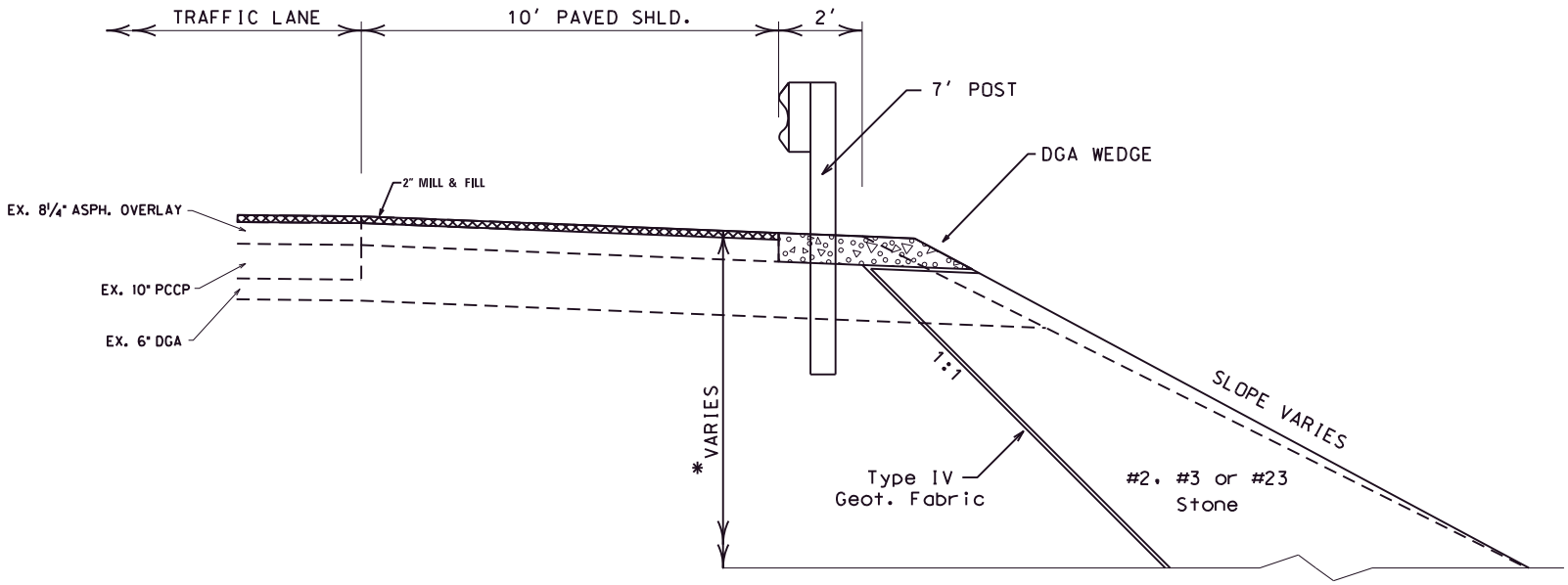


NOT TO SCALE

I–64
SHOULDER REPAIR DETAIL

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

SLIDE REPAIR DETAIL
MP 123.63
WESTBOUND I–64



*SEE GEOTECH NOTES

SLIDE REPAIR NOTE :

MATERIAL EXCAVATED FOR SLIDE REPAIR MAY BE WASTED WITHIN THE RIGHT OF WAY IN AREAS DESIGNATED BY THE ENGINEER.

THE CONTRACTOR IS TO EXCAVATE THE SLIDE AREAS IN 50 FOOT SECTIONS. ALL GRANULAR & SOIL BACKFILL IN THIS 50 FOOT SECTION SHALL BE REFILLED BEFORE OPENING UP THE NEXT 50 FOOT SECTION.

IF PROPOSED GUARDRAIL CAN NOT BE COMPLETED IN ONE PERIOD FROM SUNDAY TO FRIDAY SHOULDER CLOSURES WITH BARRELS SHALL BE INSTALLED. TEMPORARY BARRIER WALLS OR TEMPORARY GUARDRAIL SHALL BE REQUIRED AFTER A TWO WEEK PERIOD OF SHOULDER CLOSURES WITH BARRELS.

SEE GEOTECH NOTES FOR ADDITIONAL INFORMATION

QUANTITIES*

EXC.	CRUSHED AGG.	GEOT. FABRIC
3936 CY	7415 TONS	1346 SY

*(CARRIED ON GENERAL SUMMARY)

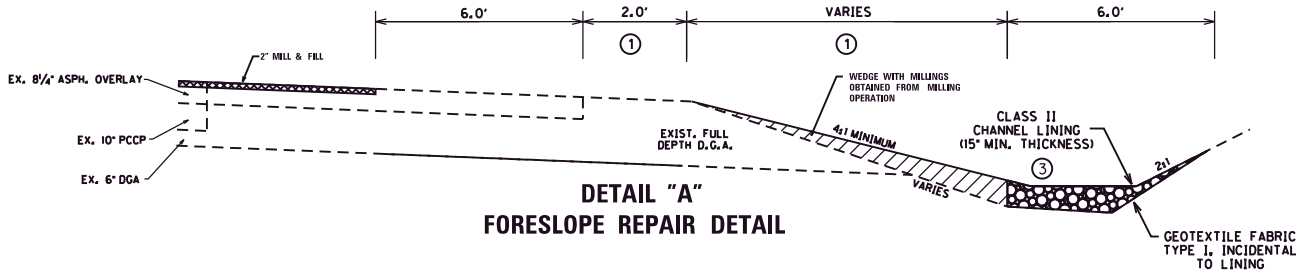
(GUARDRAIL CARRIED ON GUARDRAIL SUMMARY)

NOT TO SCALE

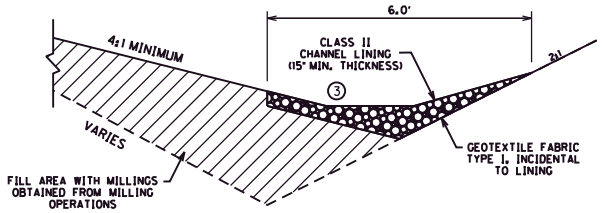
I–64
SLIDE REPAIR DETAIL

FORESLOPE REPAIR DETAILS
I–64

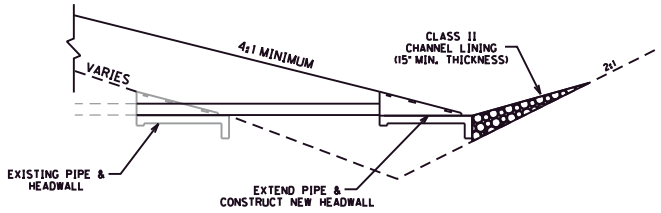
COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.0	



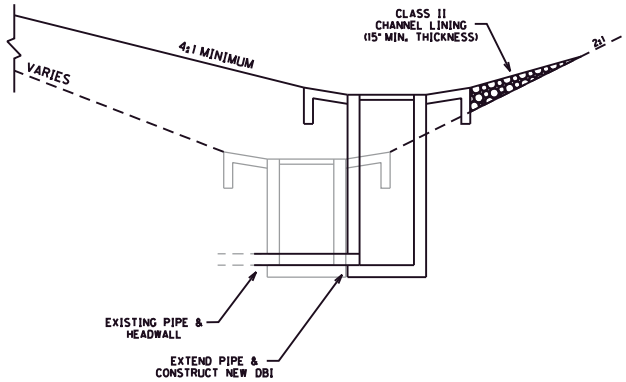
DETAIL "A"
FORESLOPE REPAIR DETAIL



DETAIL "B"
FORESLOPE REPAIR DETAIL
(OVER 15" EMB)



DETAIL "C"
FORESLOPE REPAIR
WITH HEADWALL EXTENSION



DETAIL "D"
FORESLOPE REPAIR
WITH DROP BOX INLET EXTENSION

FORESLOPE REPAIR AREA QUANTITIES*

LOCATION	LENGTH (FT)	4" PVC PIPE (FT)	PERF PIPE HDWL TY 3	DBI TY 1	REMOVE PAVED DT (SY)	ASPH. SEAL AGGREGATE (TONS)	ASPH. SEAL COAT (TONS)
MP 118.50 – 118.64 EB	655	5	1	0	22	7.3	0.87
MP 119.73 – 119.80 EB	360	5	1	0	0	4.0	0.48
MP 120.76 – 120.92 EB	835	10	2	0	0	9.3	1.11
MP 122.04 – 122.11 EB	450	0	0	0	163	5.0	0.60
MP 123.40 – 123.45 EB	300	0	0	0	0	3.3	0.40
MP 118.52 – 118.59 WB	360	5	0	1	0	4.0	0.48
MP 120.70 – 120.86 WB	440	0	0	0	0	4.9	0.59
MP 122.13 – 122.15 WB	185	5	1	0	51	2.1	0.25
TOTAL	3,585	5	5	1	236	39.8	4.78

*ALL OTHER ITEMS INCLUDED UNDER BID ITEM "DITCHING AND SHOULDERING"

(1) QUANTITIES BASED ON 10' WIDE ASPHALT SEAL

(2) IF EMBANKMENT DEPTH IS GREATER THAN 15" SEE DETAIL "B"

(3) WHEN FORESLOPE IS RAISED ABOVE EXISTING HEADWALL, REPLACE AND EXTEND TO GRADE SEE DETAIL "C"

(1) ASPHALT SEAL
2 APPLICATIONS:
ASPHALT SEAL AGGREGATE - 20 LB/SY
ASPHALT SEAL COAT - 2.4 LB/SY

NOT TO SCALE

I–64
FORESLOPE
REPAIR DETAILS

I–64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9–2023.00
FENCING SUMMARY

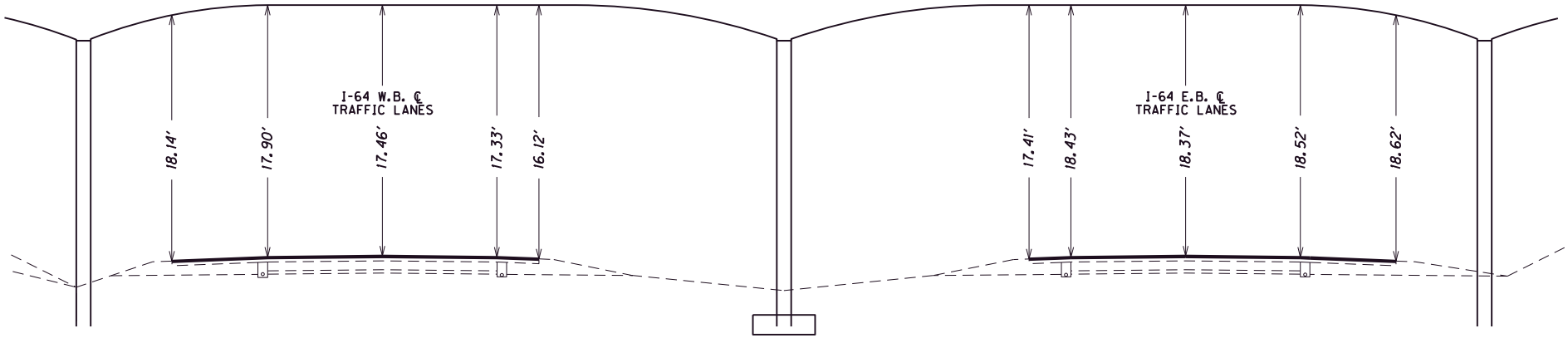
LOCATION	DIRECTION	M.P. BEGIN	M.P. END	LINEAR FEET
SALT WELL CREEK TO SLATE CREEK	EB	117.87	118.36	2750
SLATE CREEK TO KENDALL SPRINGS RD.	EB	118.42	120.01	8950
KENDALL SPRINGS RD. TO KY 36 INTERCHANGE	EB	120.08	121.22	6700
KY 36 INTERCHANGE TO SLATE CREEK	EB	121.26	121.79	3150
SLATE CREEK TO US 60 INTERCHANGE	EB	121.83	123.12	7450
US 60 INTERCHANGE TO END OF PROJECT	EB	123.14	123.65	3450
SALT WELL CREEK TO SLATE CREEK	WB	117.82	118.39	3200
SLATE CREEK TO KENDALL SPRINGS RD.	WB	118.43	120.01	9250
KENDALL SPRINGS RD. TO KY 36 INTERCHANGE	WB	120.04	121.14	6650
KY 36 INTERCHANGE TO SLATE CREEK	WB	121.20	121.78	3350
SLATE CREEK TO US 60 INTERCHANGE	WB	121.83	122.94	6600
US 60 INTERCHANGE TO END OF PROJECT	WB	122.93	123.65	4200
TOTAL				65700

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

I–64
EXISTING AND PROPOSED
BRIDGE CLEARANCES

M.P. 121.21 – KY 36 OVERPASS

EXIST. OVERPASS BRIDGE

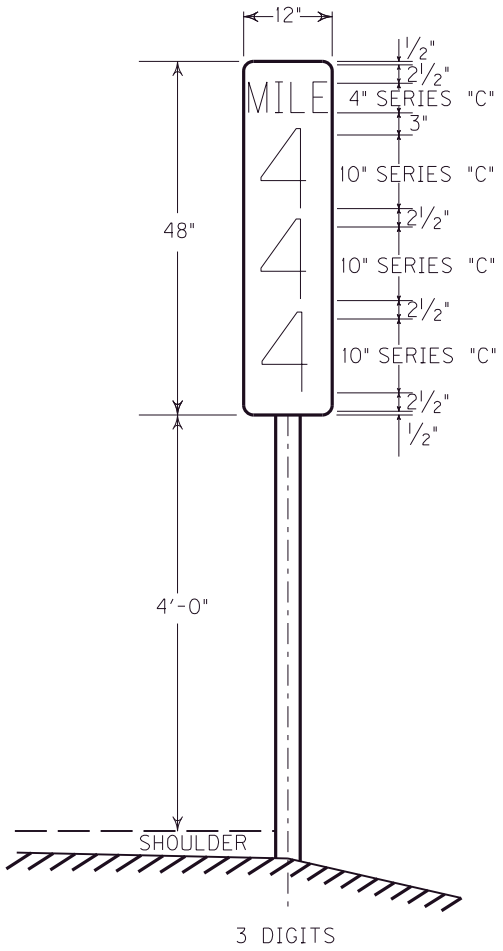


NOT TO SCALE

I–64
EXISTING BRIDGE
CLEARANCES DETAIL

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

REFERENCE LOCATION SIGN



MILE POINT RANGE FOR EASTBOUND DIRECTION	* NUMBER OF MILE POSTS
118 TO 123	6

MILE POINT RANGE FOR WESTBOUND DIRECTION	* NUMBER OF MILE POSTS
123 TO 118	6

NOTES:

* MILE POSTS ARE TO BE PLACED AT 1.0 MILE INTERVAL. (SEE TABLE INCLUDED IN PROPOSAL FOR LOCATIONS.)

** REMOVAL OF EXISTING REFERENCE MARKERS IS TO BE CONSIDERED INCIDENTAL TO THE CONTRACT.

TYPICAL SIGN PANEL DIMENSIONS AND REFERENCE MARKER LOCATION

NOT TO SCALE

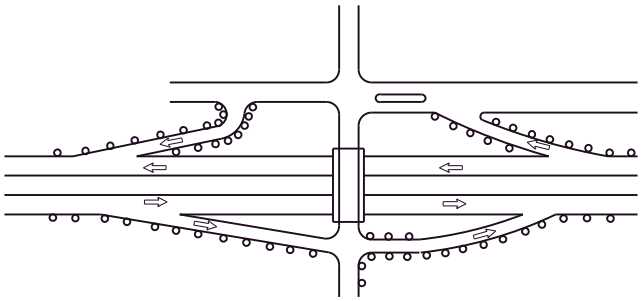
MILE MARKER SIGNING POSITIONING DETAIL SHEET

I–64
BATH COUNTY
PAVEMENT REHABILITATION, MILEPOST 117.83 TO 123.65
ITEM NO. 9–2023.00
FLEXIBLE DELINEATOR POST SPACING DETAILS

SPACING FOR HIGHWAY DELINEATORS ON HORIZONTAL CURVES

(DISTANCE IN FEET ROUNDED TO THE NEAREST 5 FEET)

RADIUS OF CURVE (IN FEET)	SPACING ON CURVE (IN FEET)	SPACING IN ADVANCE AND BEYOND CURVE (IN FEET)		
		1ST	2ND	3RD
50	20	40	65	125
150	30	60	90	180
200	35	70	110	215
250	40	85	125	250
300	50	95	145	290
400	55	110	170	300
500	65	125	190	300
600	70	140	210	300
700	75	150	230	300
800	80	165	245	300
900	85	175	260	300
1000	90	185	275	300



TYPICAL INTERCHANGES RAMP DELINEATION

SPACING FOR SPECIFIC RADII NOT SHOWN MAY BE INTERPOLATED FROM TABLE. THE MINIMUM SPACING SHOULD BE 20 FEET. THE SPACING ON CURVES SHOULD NOT EXCEED 300 FEET. IN ADVANCE OF OR BEYOND A CURVE, AND PROCEEDING AWAY FROM THE END OF THE CURVE, THE SPACING OF THE FIRST DELINEATOR IS 2S, THE SECOND 3S, AND THE THIRD 6S BUT NOT TO EXCEED 300 FEET. S REFERS TO THE DELINEATOR SPACING FOR SPECIFIC RADII COMPUTED FROM THE FORMULA $S=3\sqrt{R-50}$.

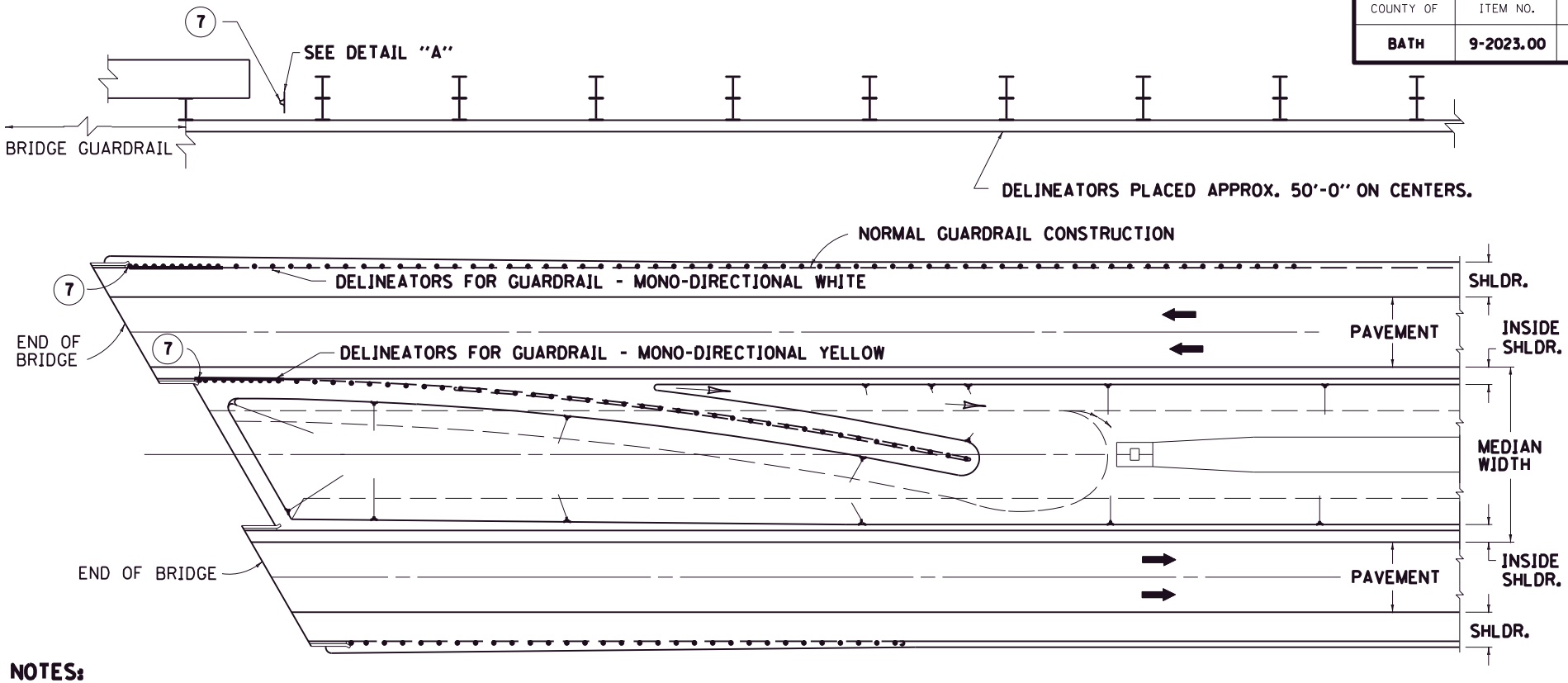
DELINEATION ON THE TANGENT SECTION OF THE MAINLINE WHERE RAISED PAVEMENT MARKERS ARE IN PLACE IS NOT REQUIRED. HOWEVER, DELINEATION IS REQUIRED ON ALL CURVES OF THE MAINLINE. THE SPACING SHALL BE COMPUTED FROM THE FORMULA $S=3\sqrt{R-50}$.

NOTE: CHANNELIZATION ON RAISED ISLANDS ON RAMPS AT RAMP TERMINI IS TO BE DELINEATED WITH A MINIMUM OF THREE DELINEATORS PER ISLAND. NO DELINEATION ON PAINTED ISLANDS.

FOR ADDITIONAL INFORMATION ON DELINEATION, SEE SECTION 3D OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

I-64
FLEXIBLE DELINEATOR
POST SPACING DETAIL

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	



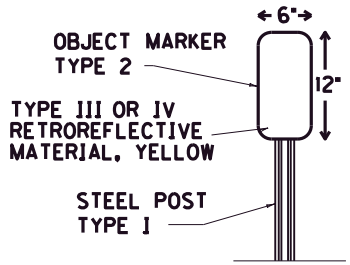
NOTES:

1. DELINEATOR 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.

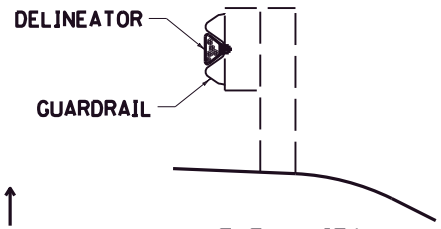
CODE	PAY ITEM	PAY UNIT
	DELINEATORS FOR CONCRETE BARRIERS	
1984	DELINEATOR FOR BARRIER WALL - MONO-DIRECTIONAL WHITE	EACH
1985	DELINEATOR FOR BARRIER WALL - MONO-DIRECTIONAL YELLOW	EACH
	DELINEATORS ON GUARDRAIL	
1982	DELINEATOR FOR GUARDRAIL - MONO-DIRECTIONAL WHITE	EACH
1983	DELINEATOR FOR GUARDRAIL - MONO-DIRECTIONAL YELLOW	EACH

3. THE DELINEATORS SHALL BE YELLOW IN COLOR WHEN THE BARRIER IS PLACED IN THE MEDIAN AND/OR ON THE LEFT SIDE OF THE DRIVING LANE. THE DELINEATORS SHALL BE WHITE IN COLOR WHEN THE BARRIER IS PLACED ON THE RIGHT SIDE OF THE DRIVING LANE.
4. DELINEATORS SHALL BE APPLIED 300 FEET IN ADVANCE OF AND THROUGHOUT THE LENGTH OF ALL BRIDGES THAT DO NOT HAVE FULL WIDTH SHOULDERS. SPACING ON BRIDGES AND 300 FEET IN ADVANCE OF BRIDGES SHALL BE 50 FEET ON CENTERS. THE FIRST DELINEATOR ON THE GUARDRAIL SHALL BE PLACED 50 FEET FROM THE DELINEATOR AT THE END OF THE BRIDGE. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
5. WHEN CONCRETE BARRIERS EXTEND ACROSS NARROW SHOULDER WIDTH 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 SEPIA DRAWING 004.
6. GUARDRAIL DELINEATORS SHALL COMPLY WITH CURRENT SEPIA DRAWING 002.

(7) SEE SECTION 718 OF THE CURRENT STANDARD SPECIFICATIONS FOR "OBJECT MARKER TYPE 2".



OBJECT MARKER TYPE 2
DETAIL "A" (7)



ELEV. VIEW

PRIMARY USE:
(PAVEMENT REHABILITATION PROJECTS)

KENTUCKY
DEPARTMENT OF HIGHWAYS

DELINEATORS AT NARROW SHOULDER BRIDGES

SUBMITTED _____ 6-15-2012
DIRECTOR DIVISION OF DESIGN — DATE

001

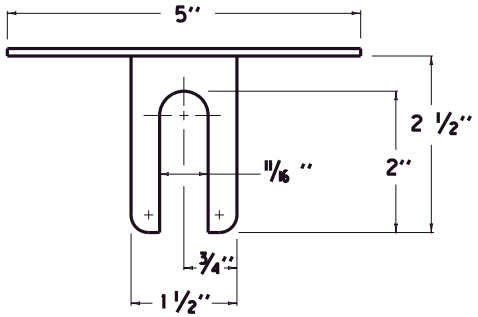
COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

NOTES

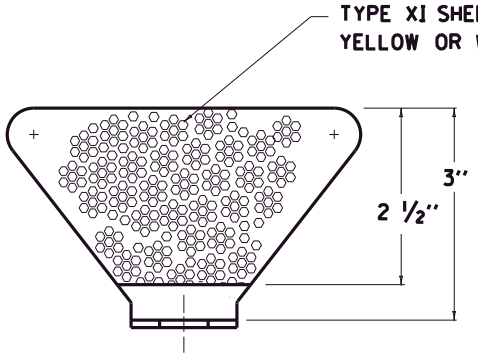
1. THE DELINEATOR'S SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.
2. DELINEATOR SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
3.

CODE	PAY ITEM	PAY UNIT
1982	DELINEATOR FOR GUARDRAIL - MONO DIRECTIONAL WHITE	EACH
1983	DELINEATOR FOR GUARDRAIL - MONO DIRECTIONAL YELLOW	EACH
1987	DELINEATOR FOR GUARDRAIL - BI-DIRECTIONAL WHITE	EACH

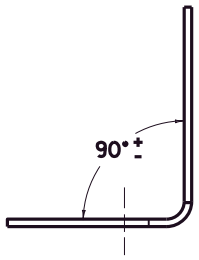
4. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.
5. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.
6. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.
7. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT SEPIA DRAWING 004.
8. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



PLAN VIEW

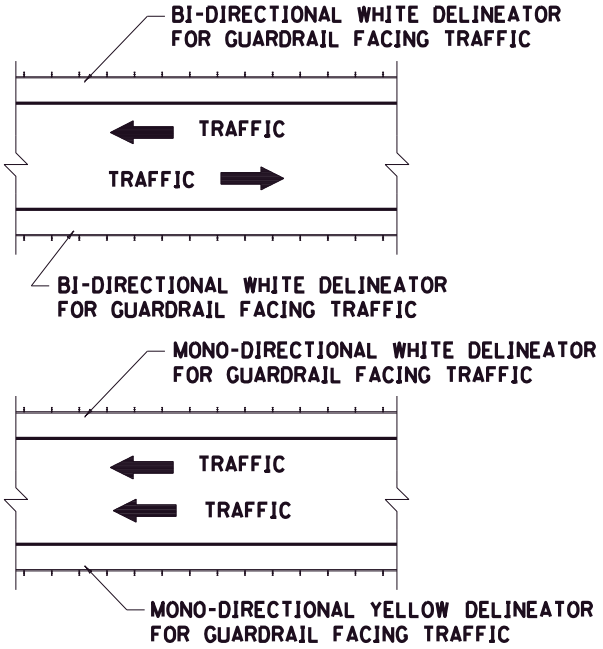


FRONT VIEW

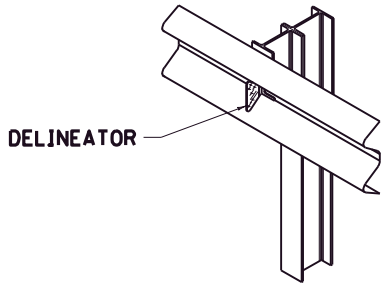


SIDE VIEW

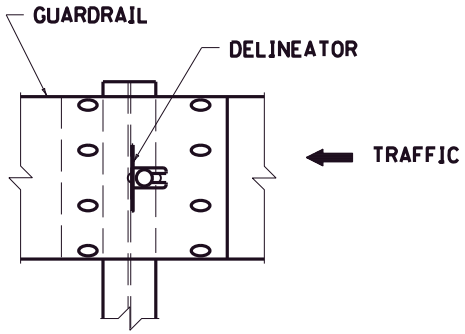
NOTE: DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.



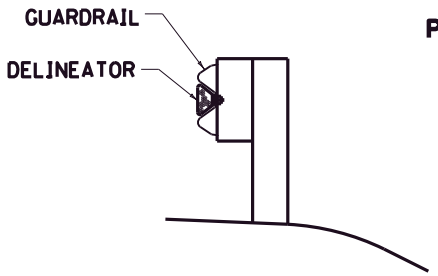
PLACEMENT OF DELINEATORS FOR GUARDRAIL



ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW

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.

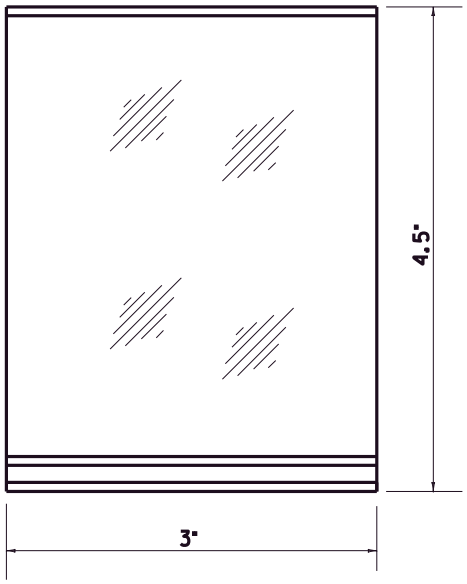
KENTUCKY
DEPARTMENT OF HIGHWAYS

DELINEATORS FOR GUARDRAIL

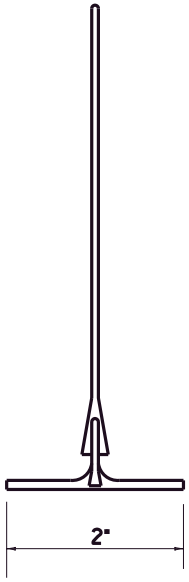
SUBMITTED _____ 6-15-2012
DIRECTOR DIVISION OF DESIGN — DATE

002

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	



FRONT ELEVATION



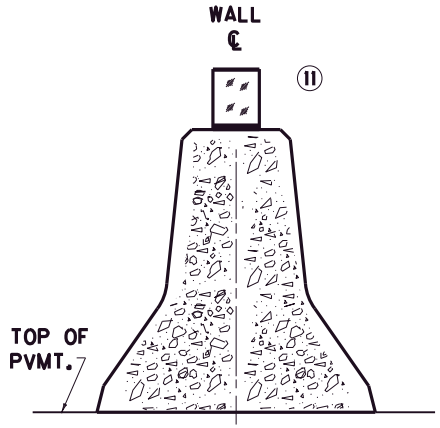
SIDE ELEVATION

NOTES

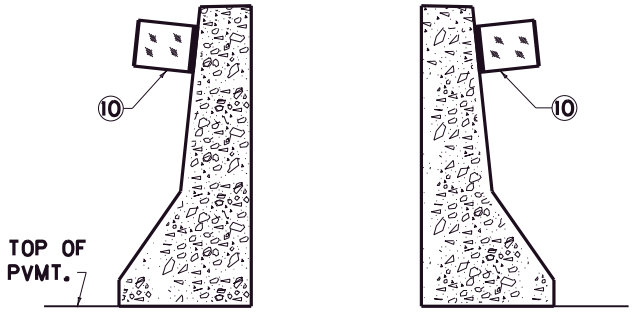
1. BARRIER WALL DELINEATORS SHALL BE REQUIRED ON ALL BARRIER WALL.
2. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
3.

CODE	PAY ITEM	PAY UNIT
1984	DELINEATOR FOR BARRIER WALL - MONO DIRECTIONAL WHITE	EACH
1985	DELINEATOR FOR BARRIER WALL - MONO DIRECTIONAL YELLOW	EACH
1986	DELINEATOR FOR BARRIER WALL - BI-DIRECTIONAL YELLOW	EACH
1990	DELINEATOR FOR BARRIER WALL - BI-DIRECTIONAL WHITE	EACH

4. IN ACCORDANCE WITH THE MUTCD (CURRENT EDITION), THE COLOR OF DELINEATORS SHALL MATCH THE COLOR OF THE EDGE LINE THAT THEY SUPPLEMENT. IN GENERAL, DELINEATORS ON BARRIER WALL ALONG THE LEFT SIDE OF DRIVING LANES SHALL BE YELLOW, AND DELINEATORS ON BARRIER WALL ALONG THE RIGHT SIDE OF DRIVING LANES SHALL BE WHITE. DELINEATORS IN BOTH DIRECTIONS ON A TWO-LANE, TWO-WAY ROADWAY SHALL BE BI-DIRECTIONAL WHITE.
5. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS. THE DELINEATOR'S SHAPE AND DIMENSIONS ARE FOR ILLUSTRATION PURPOSES ONLY.
6. THE DELINEATOR UNIT SHALL HAVE THE REFLECTIVE SURFACE INSTALLED FACING TRAFFIC.
7. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMENDATION.
8. DELINEATORS SHALL BE ATTACHED TO CONCRETE MEDIAN BARRIER WITH AN APPROVED ADHESIVE.
9. DELINEATOR SHEETING SHALL BE TYPE XI, YELLOW OR WHITE.
10. DELINEATORS SHOULD BE MOUNTED AT A HEIGHT OF APPROXIMATELY 4' ABOVE PAVEMENT. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT THE SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL.
11. FOR BARRIER WALLS 50" OR LESS IN HEIGHT, DELINEATORS MAY BE INSTALLED ON TOP OF THE BARRIER WALL. FOR MEDIAN BARRIER WALLS 50" OR LESS IN HEIGHT THAT SEPARATE TWO-WAY TRAFFIC, BI-DIRECTIONAL YELLOW DELINEATORS MAY BE INSTALLED ON THE TOP OF THE BARRIER WALL IN LIEU OF SIDE-MOUNTED MONO-DIRECTIONAL YELLOW DELINEATORS.



NORMAL (SOLID) WALL SECTION



(SEPARATE SEGMENT) WALL SECTION

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.

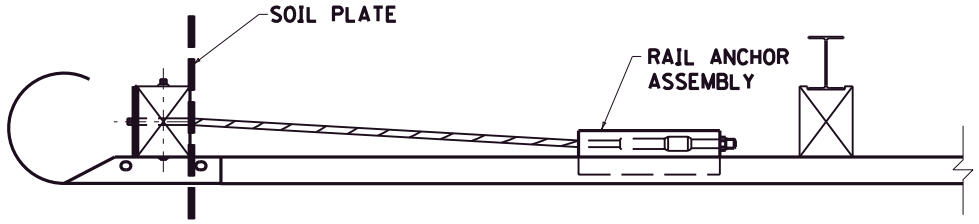
KENTUCKY
DEPARTMENT OF HIGHWAYS

DELINEATORS FOR CONCRETE BARRIERS

SUBMITTED J. Draper 7-13-2012
DIRECTOR DIVISION OF HIGHWAY DESIGN — DATE

0041

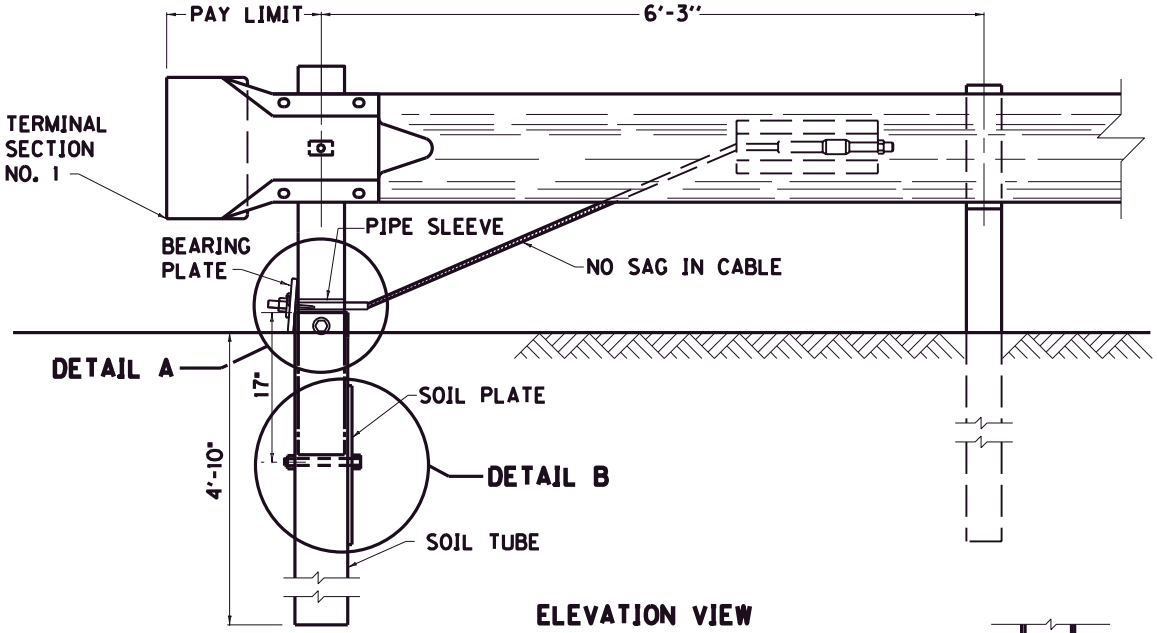
COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	



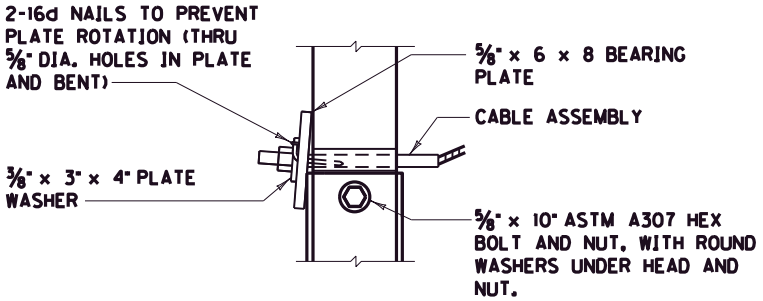
PLAN VIEW

NOTES

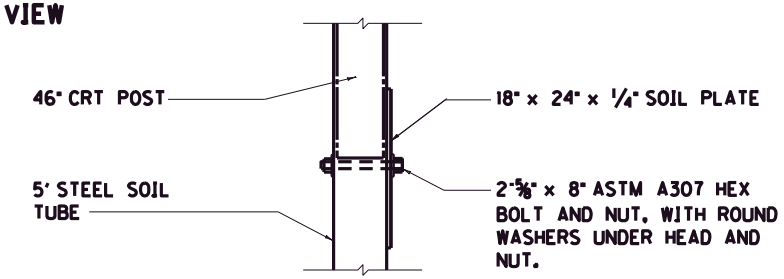
1. GUARDRAIL END TREATMENT TYPE 2A SHALL BE TO THE PAY LIMITS AS DETAILED. THE CONTRACT UNIT BID IS EACH AND SHALL INCLUDE A TERMINAL SECTION NO. 1, RAIL ANCHOR ASSEMBLY, CABLE ANCHOR ASSEMBLY AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE INSTALLATION AS DETAILED.
2. IN THE EVENT SOLID ROCK IS ENCOUNTERED, THE SOIL TUBE MAY BE SHORTENED, PROVIDED IT EXTENDS INTO THE SOLID GROUND A MINIMUM OF 3 FEET.
3. INSTALL BEARING PLATE SO THAT THE "V" OPENING IS AT THE TOP.



ELEVATION VIEW



DETAIL A



DETAIL B

USE WITH CUR. STD. DWGS.
RBR-010, RBI-001,
RBI-002, RBI-003

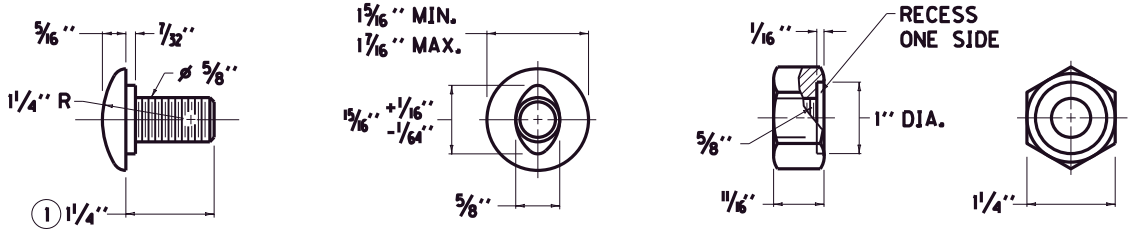
KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL END TREATMENT TYPE 2A

SUBMITTED _____ 6-15-2012
TEBM DIVISION OF DESIGN DATE

007

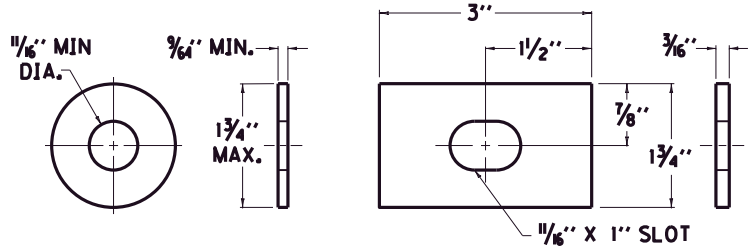
COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	



5/8" BUTTON HEAD BOLT AND RECESSED NUT

NOTES

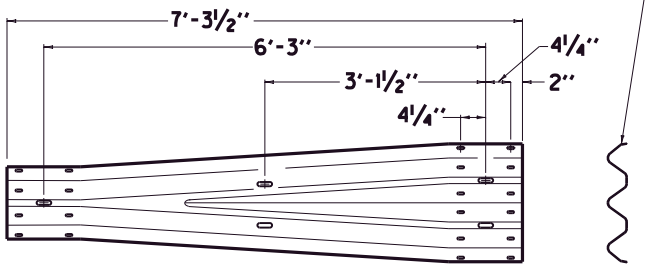
1. RAIL BOLT SIMILAR EXCEPT LENGTH.
2. THE THRIE BEAM TO "W" BEAM CONNECTOR SHALL COMPLY WITH AASHTO M-180 CLASS A, TYPE 2 EXCEPT WHERE IN CONFLICT WITH THIS DETAIL.



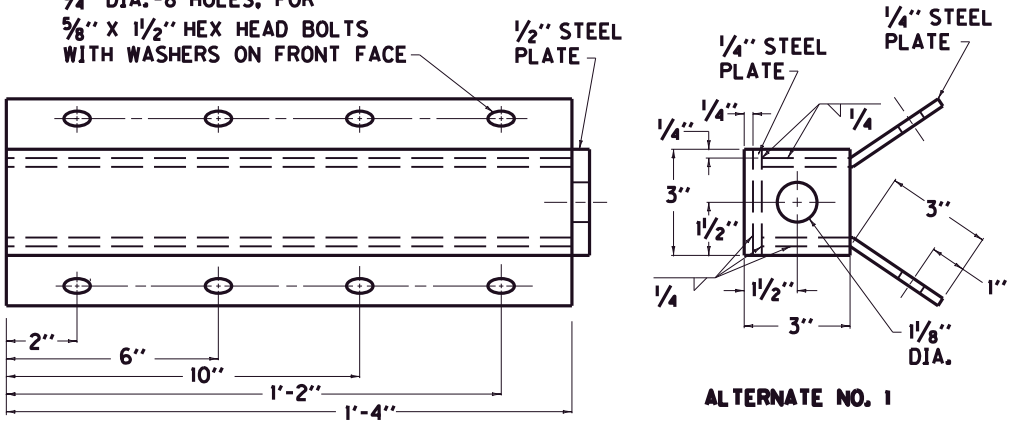
ROUND WASHER AND RECTANGULAR PLATE WASHER

SEE CUR. STD. DWG. RBR-001 FOR DIMENSIONS

SEE CUR. STD. DWG. RBR-100 FOR DIMENSIONS



THRIE BEAM TO "W" BEAM CONNECTOR (2)



ALTERNATE NO. 1

ALTERNATE NO. 2

RAIL ANCHOR ASSEMBLY

KENTUCKY DEPARTMENT OF HIGHWAYS

GUARDRAIL COMPONENTS

SUBMITTED TEBM DIVISION OF DESIGN — 6-15-2012 DATE

008

I-64 BATH COUNTY
FD04 SPP 006 0064 117-124
Item No. 9-2023.00

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

I. DESCRIPTION

Perform all work in accordance with the Department's 2012 Standard Specifications, Supplemental Specifications, Special Provision 76 and other applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

(1) Maintain and Control Traffic; (2) Remove and replace Guardrail and Guardrail End treatments at the locations listed and/or as directed by the Engineer; (3) Pavement markers; (4) Asphalt Pavement Milling and Texturing; (5) Asphalt Surface; (6) Bridge Deck Restoration; and (7) All other work specified as part of this contract.

II. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these notes.

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

B. **Dense Graded Aggregate.** Contrary to Special Provision No. 76, Crushed Stone Base may not be furnished in lieu of DGA.

C. **Pavement Markings -6 inch Tape.** Use Durable Waterborne Markings for permanent striping (12 inch at entrance and exit ramp tapers).

D. **Crushed Aggregate Size No. 2.** Crushed Aggregate Size No. 2 will be limestone.

E. **Channel Lining Class II & III.** Channel lining will be limestone and is to be

placed at pipe outlets with significant erosion and in ditch repair locations as directed by the Engineer.

F. **Erosion Control Blanket.** Erosion control blanket is to be placed in all ditching areas when ditching is complete, on slope stabilization areas, or as directed by the Engineer. Use Seed Mixture No. 1

III. CONSTRUCTION METHODS

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

B. **Site Preparation.** Be responsible for all site preparation. Do not disturb existing signs. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration, temporary and permanent erosion and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.

C. **Disposal of Waste.** Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads will not be allowed. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits, but will be incidental to the other items of the work.

D. **Final Dressing, Clean Up, and Seeding and Protection.** After all work is completed, completely remove all debris from the job site. Perform Class A Final Dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. I. These items are incidental to other items in the contract.

E. **Guardrail.** Remove, replace and extend guardrail and guardrail End Treatments listed in the Guardrail Summary or as directed by the Engineer. Quantities are approximate only. Actual locations will be determined by the Engineer at the time of construction. Grade and reshape shoulders to proper template for new End Treatment. Utilize DGA for embankment when required for new end treatments. Remove any existing guardrail with a lane closure in place. Do not leave the area unprotected. After the guardrail is removed, a shoulder closure shall remain in place until the guardrail is replaced in that area. A maximum of seven calendar days will be allowed between the removal of a guardrail section and the installation of new guardrail at that same location unless otherwise approved by the Engineer.

F. **Pavement Striping and Pavement Markers.** Permanent striping will be in accordance with Section 112, except that:

(1). Striping will be 6" in width, except 12” in gore area;
(2). Permanent striping will be in place before a lane is opened to traffic; and
(3). Permanent striping will be Durable Waterborne Markings.
(4). Pavement Markers shall be installed per Standard Drawings TPM-105-02 (Arrangement C), TPM-125-02, TPM-130-02 and TPM-135-02.
(5). Inlaid Pavement Markers shall be used between I-64 driving lanes only. All others shall be Type V Pavement Markers.

G. **On-Site Inspection.** Each Contractor submitting a bid for this work will make a thorough inspection of the site prior to submitting a bid and will thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.

H. **Caution:** Information shown on the drawings and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information above.

I. **Utility Clearance.** It is not anticipated that utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities.

IV. METHOD OF MEASUREMENT

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

B. **Site Preparation.** Other than the bid items listed, site preparation will not be measured for payment, but will be incidental to the other items of work.

C. **Crushed Aggregate Size No. 2.** Payment will be based on the tons used around perforated pipe outlet headwalls, erosion around pipe inlets and outlets, washouts behind guardrail, slide repair areas and other areas as directed by the Engineer.

D. **Pavement Markers and Permanent Striping.** Permanent striping Durable Waterborne Markings (6" and 12") is measured per linear foot. See Traffic Control Plan. Inlaid Pavement Markers (see Special Note) and Type V Pavement Markers are measured as each. No direct payment will be made for the removal

of the existing pavement markers prior to the milling operation and shall be considered incidental to milling and texturing.

E. **Erosion Control.** Erosion control items not listed as bid items will not be measured for payment, but will be considered incidental to the "lump sum" price for the bid item "KPDES Permit & Temporary Erosion Control".

F. **Erosion Control Blanket.** Erosion Control Blanket is measured by square yard and is to be used in ditching areas and slope stabilization areas as directed by the Engineer.

G. **Base Failure Repair.** Base failure repair shall be bid in "square yards" and consists of all labor, equipment and materials necessary to complete the repairs as shown in the detail provided in the proposal. Additional quantities have been included for base failure repairs.

H. **Shoulder and Foreslope Repair.** Shoulder repair areas are shown on the "Shoulder Repair" and "Shoulder Repair with Special Concrete Header Curb" details and may be modified or additional areas repaired as directed by the Engineer. Existing roadside foreslopes are to be repaired in accordance with the "Foreslope Repair Detail". See Basis of Payment for Ditching and Shouldering.

I. **Remove Existing Paved Ditch.** Existing paved ditches encountered within limits of Ditch Correction locations shall be removed and replaced with Class II Channel Lining. Quantities for Remove Paved Ditch and Class II Channel Lining have been included in the general summary.

V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at his expense.

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

B. **Site Preparation.** Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.

C. **Dense Grade Aggregate.** See Section 302 of the Standard Specifications.

D. **Pavement Markers and Permanent Striping.** See Traffic Control Plan.

E. **Lane Closures.** Contrary to the specifications Lane Closures in operation for more than three days shall not be a bid item and shall be considered incidental to the bid item "Maintain and Control Traffic". Arrow boards and signs shall be paid for one time regardless of how many times they are moved.

F. **Ditching and Shouldering.** In addition to Section 209 of the Standard Specifications, the bid item "Ditching and Shouldering" shall include repairing the shoulders and foreslopes as shown on the details provided in the proposal. Asphalt Base per ton used in the shoulder repair, additional milling, removal and replacement of guardrail and construction of special concrete header curb (as applicable) shall be paid separately.

G. **Remove Existing Paved Ditch.** The removal of the existing paved ditch shall be paid for as "square yards" and shall include the removal and disposal of the existing concrete off the project limits.

H. **Milling and Texturing.** Milling and texturing will be paid for per section 408.05 of the 2012 Standard Specifications. No direct payment will be made for stockpiling, reloading and placing the milled material in areas specified in the proposal.

I. **Waterblasting Striping Removal.** Contrary to Section 713 of the Standard Specifications, the abrasive method for removing striping shall not be permitted on this project.

NOTES APPLICABLE TO PROJECT
PAVEMENT REHABILITATION
I-64 BATH COUNTY
FD04 SPP 006 0064 117-124
Item No. 9-2023.00

---

1. There is a summary of Base Failure repair locations. The Engineer will determine the ultimate locations that will be repaired based upon the condition of the pavement at the time the repairs are accomplished. The repair locations listed may be lengthened, shortened, or eliminated completely if the conditions are such that modification of the locations would be deemed desirable by the Engineer.

2. The dimensions shown on the typical section for pavement and shoulder widths and thickness are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless otherwise specified in the Proposal.

3. The contractor is to be advised of the locations of overhead utility wires on the project. The following locations are approximate:

   I-64 M.P. 121.21
   I-64 M.P. 122.01
   I-64 M.P. 122.17
   I-64 M.P. 123.41
   I-64 M.P. 123.43
   I-64 M.P. 123.44

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

4. The contractor is to be advised of the locations of underground utilities on the project. The following locations are approximate:

   I-64 M.P. 121.80 (Waterline Crossing)
   I-64 M.P. 123.02 (Waterline Crossing)

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

5. All Milepost signs within the project limits are to be replaced in accordance to the following table:

MILEPOST	NORTHING	EASTING
118	3935181.6839	5481176.7367
119	3938810.5075	5484971.3524
120	3938690.8455	5490192.8741
121	3939528.0494	5495105.0245
122	3942182.0021	5499669.5546
123	3944835.9549	5504234.0847

NOTE: Northing and Easting values shown are representative of Mile Points projected to centerline. Replacement should be approved and/or directed by the Engineer. The contractor will be responsible for the replacement of milepost signs if damaged during construction. No direct payment shall be made for locating the proposed mile posts.

6. Areas throughout the project have foreslopes that have eroded significantly. These areas shall be dressed with millings obtained from milling operations as shown on the "Foreslope Repair Detail" or as directed by the Engineer. In areas where foreslope corrections are occurring, positive drainage must be maintained. Locations and quantities for extensions of headwalls and drop boxes, Class II Channel Lining, Asphalt Seal Coat and Asphalt Seal Aggregate are shown on the "Foreslope Repair Detail". Quantities are carried over and included in the General Summary. Geotextile Fabric Type 1 is incidental to Class II Channel Lining. Reshaping of the ditch foreslopes shall be in addition to Section 209 of the Standard Specification, "Ditching and Shouldering".

7. Areas throughout the project have shoulders that are eroding significantly. These areas shall be repaired in accordance with either the "Shoulder Repair Detail" or the "Shoulder Repair with Special Concrete Header Curb Detail", depending on location. The repair locations listed may be lengthened, shortened, or eliminated by the Engineer. Locations and quantities for Relocate Guardrail System and Special Concrete Header Curb are shown on their respective Details. Quantities are carried over and included in the General Summary. Repairing the shoulders per respective detail shall be in addition to Section 209 of the Standard Specification, "Ditching and Shouldering".

8. There is one area along the project in need of a Slide Repair. This area shall be repaired in accordance with the "Slide Repair Detail" and the attached Geotechnical notes or as directed by the Engineer. Quantities for the Slide Repair are shown on the "Slide Repair Detail" and are carried over and included in the General Summary.

9. A significant portion of the project length has a minimum 1” drop off at the edge of pavement. Therefore quantities of DGA, Asphalt Seal Coat, and Asphalt Seal Aggregate are included in the General Summary for a project wide DGA wedge repair. Quantities for DGA, Asphalt Seal Coat and Asphalt Seal Aggregate for end treatment replacements have also been included.

10. Any existing guardrail segments and end treatments that have sustained damage are to be replaced with this project. Locations for guardrail segments and end treatments known to be damaged are listed by milepoint in the included Guardrail Summary sheets. Specific segments to be replaced are to be approved by the Engineer during construction. Extensions of guardrail and replacement of damaged guardrail are to begin one week after the general milling and filling paving operations are completed.

11. The Contractor shall deliver existing salvaged guardrail system materials to the Central Sign Shop and Recycle center at 1224 Wilkinson Blvd in Frankfort, KY. Contact Section Supervisor at (502) 564-8187 to schedule the delivery of material. Deliver the material between the hours of 8:00AM and 3:30PM, Monday through Friday. There is a guardrail delivery verification sheet which must be completed and signed by the Contractor, Engineer and a representative of the Central Sign Shop and Recycle Center.

12. Delineators shall meet the requirements of Section 830 and 838 of the Standard Specifications, and be placed in accordance with Section 3D of the M.U.T.C.D., current edition.

13. The existing edge drain system is to be preserved. Any part of the edge drain system damaged during construction will be replaced at the contractor's expense. The Contractor shall clean all existing perforated pipe headwalls on the project. The cleaning of these headwalls is incidental to the bid item for “Ditching and Shouldering”.

14. A quantity of Crushed Aggregate No. 2, Channel Lining Class II and Channel Lining Class III has been included to be used in eroded areas around pipe inlets or in ditches to be repaired as shown on the details. The actual limits of the channel lining shall be as directed and/or approved by the Engineer. Geotextile Fabric Type I, as outlined in Section 214 of the Standard Specifications, will not be measured for payment and will be considered incidental to channel lining.

15. Any roadway signs that are damaged during construction are to be replaced at the contractor's expense.

16. Any light poles that are damaged during construction are to be replaced at the contractor's expense.

17. The cleaning of existing pipe culvert inlets and outlets 36 inches or less in diameter are incidental to the bid item for "Ditching and Shouldering" in accordance with Section 209 of the 2012 Edition of the Standard Specifications for Road and Bridge Construction. This includes the cleaning of existing perforated pipe headwalls.

18. The existing median pier for the KY 36 bridge (M.P. 121.21) shall be protected with Type IX Crash Cushions. Quantities for Crash Cushion Type IX's, Concrete Median Barrier Ends, Class A Concrete and Crushed Aggregate Size No. 57 have been included on the General Summary. All earthwork shall be considered incidental to Crash Cushion Type IX.

19. Areas where the Island Curb and Gutter replacement is required are listed below. The removal of the existing damaged curb shall be considered incidental to the bid item "Island Curb and Gutter".

    I-64 M.P. 120.00
    I-64 M.P. 121.80

20. The existing Right of Way fence is to be removed and replaced with this project. A summary has been included. The contractor shall reference the existing fence prior to its removal and shall construct the new fence in the same location. The contractor shall preserve, to the maximum extent possible, the vegetative screen along the existing fence. Total clearing of all vegetation along the fence will not be permitted. Selective manual clearing shall be used to provide only the clearance necessary to permit the removal and replacement of the fence. Alternate clearing methods may be used if approval is granted from adjacent property owners. The cost of this clearing shall be incidental to the unit price bid for "Remove and Replace Fence". In select locations where livestock may be present, temporary fencing may be required as directed by the Engineer. Temporary fencing will not be measured for payment and will be considered incidental to the bid item "Remove and Replace Fence".

TRAFFIC CONTROL PLAN
BATH COUNTY
I-64
FD04 SPP 006 0064 117-124
Item No. 9-2023.00

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

TRAFFIC CONTROL GENERAL

Except as provided herein, “Maintain and Control Traffic” shall be in accordance with the 2012 Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings. Do NOT use cones for lane closures or shoulder closures.

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition at the beginning of the work and maintained in like new condition until completion of the work. Traffic control devices will conform to current MUTCD.

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

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

PROJECT PHASING & CONSTRUCTION PROCEDURES

No lane closures will be allowed during the following days unless otherwise directed and/or approved by the Engineer:

November 21-25, 2012	Thanksgiving Weekend
December 22-26, 2012	Christmas Weekend
December 31, 2012-January 2, 2013	New Years Weekend
March 30-April 1, 2013	Easter Weekend
April 30 - May 5, 2013	Derby Week
May 29-June 3, 2013	Memorial Day Weekend
July 4-7, 2013	Independence Day Weekend

Traffic may be reduced to one lane in each direction all other times.

The bridge deck overlay construction proposed for the Slate Creek bridges will require continuous lane closures for an approximate three week period for each bridge. The total continuous lane closure period shall not exceed 22 days. A 12 day continuous lane closure will be allowed during Phase I construction to allow additional time to construct all of the shoulder digouts required. During Phase II construction a 10 day continuous lane closure will be allowed.

All wide load traffic heading to the I-64 project area during bridge repair operations is to be rerouted along a detour using Changeable Message Signs. The detour route will follow US 68 and KY 9 (AA Highway). A schematic for the detour route has been included in the proposal.

Approximate pavement repair locations are listed in the proposal. The Engineer will determine the exact location at the time of construction. Once removal of pavement at a particular repair location has begun, the contractor shall work continuously to complete the work required to bring the pavement back to grade. Type III Barricades shall be placed immediately in front of pavement removal areas. Type III Barricades will not be measured for payment and will be considered incidental to “Maintain and Control Traffic”, Lump Sum.

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

During the days and hours when a lane closure is allowed, maintain traffic as specified in the phasing notes and typical sections. Any other work not requiring traffic lane widths to be restricted due to barrels or equipment encroaching into the driving lanes can be done during the remaining hours when two lanes of traffic must be maintained. Please refer to the “Special Note for Fixed Completion Date and Liquidated Damages” for damage rates per hour associated with

failure to maintain the required number of lanes during the specified time period. Liquidated Damages, at the rate specified per hour in the "Special Note for Fixed Completion Date and Liquidated Damages", will be assessed for each hour two lanes of traffic is not maintained.

The contractor must notify the Engineer at least fourteen (14) days prior to the beginning of each construction phase in either direction.

SHOULDER PREPARATION AND RESTORATION

The clear lane width will be 12 feet; however, make provisions for the passage of wide loads up to 16' that can not otherwise use the wide load detour. Use a lane closure all times when work is performed in the lane or adjacent shoulder. Shoulders used as temporary roadways will be inspected by the Engineer and if deemed necessary by the Engineer, repaired with asphalt mixture for leveling & wedging as directed prior to opening to traffic. Perform any maintenance of the shoulder as deemed necessary by the Engineer in order to maintain traffic. Remove failed materials and perform additional patching as directed by the Engineer prior to using the shoulder as a travel lane. Patch and remove any foreign debris on the shoulders as directed by the Engineer. Remove existing striping by water blasting.

Project Phasing:

PHASE I (Bridge Repair)

After installing a lane closure for the inside lane, construct the inside shoulder digouts on both the approach and departure ends of each bridge being repaired. Remove this lane closure and install a lane closure for outside lane, directing traffic into the inside lane and shoulder. Install temporary barrier wall as shown on the Traffic Control Plan Sheets. While maintaining traffic on inside lane and shoulder, construct the outside portion of the bridge deck repair. In preparation of Phase II work, construct the outside shoulder digouts on both the approach and departure ends of each bridge being repaired.

PHASE II (Bridge Repair)

Shift traffic to the outside lane and shoulder and close the inside lane to traffic. Relocate the temporary barrier wall as shown on the Traffic Control Plan Sheets. Truck Mounted Attenuators shall be required while relocating the temporary barrier walls. While maintaining traffic on outside lane and shoulder, complete the bridge deck repairs.

PHASE III

Close the outside lanes to traffic. Construct Base Failure Repairs as shown on the Base Failure Repair Detail. After required settlement period, mill 2 inches of existing surface pavement and place 2 inches of surface pavement for outside shoulders and driving lane. Perform all outside road work during Phase III. All ramp work will also be completed during this phase.

PHASE IV

Shift traffic to the outside lanes and close the inside lanes to traffic. Mill 2 inches and place 2 inches of surface pavement on inside shoulders inside driving lane. Perform any median work during this phase.

NOTE on project phasing: Phase III and Phase IV may not be reversed with this project.

NOTE on Base Failure Repair operations: Once the pavement has been removed, the contractor must work continuously until the pavement has been replaced. The Engineer may restrict the number of locations being repaired at the same time. Pavement repairs must be completed 2 weeks prior to any general milling & filling pavement operations on those specific repair locations.

PHASE V – TRAFFIC COUNTING INDUCTANCE LOOPS

Traffic counting inductance loops must be installed after milling operations are completed and before surfacing operations have been started. Close one lane, in the direction of work only, using drums and flashing arrows in accordance with the Standard Drawings and these notes. Lane closures will be permitted only during hours of actual operations. Lane closures will be shortened, reduced to a shoulder closure, or removed as appropriate, when the Contractor does not have active operations requiring a lane closure.

PHASE VI – PERMANENT STRIPING

After all other work is completed, place permanent striping. Mobile operations may be utilized. In addition to newly paved areas, place permanent striping on bridge decks within the project limits.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer, up to a maximum of two miles long with a minimum of one mile between successive lane closures. Contrary to section 112, lane closures will **NOT** be measured for payment, but are considered incidental to “Maintain and Control Traffic,” Lump Sum.

SIGNS

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted TRUCKS USE LEFT/RIGHT LANE, LEFT/RIGHT LANE

CLOSED 1 MILE, LEFT/RIGHT LANE CLOSED 2 MILE, LEFT/RIGHT LANE CLOSED 3 MILE, SLOWED/STOPPED TRAFFIC AHEAD. Signage for reduced speed limits and double fine work zones will be furnished, relocated, and maintained by the Contractor.

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

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

FLASHING ARROWS

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

TEMPORARY CONCRETE BARRIER WALL

The contractor shall furnish and install the temporary concrete barrier wall Type 9T required for the bridge repair operations. The Department **WILL NOT** take possession of the temporary concrete barrier wall Type 9T upon completion of the work.

PORTABLE CHANGEABLE MESSAGE SIGNS

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

TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved truck mounted attenuators (TMA) in advance of work areas when workers are present less than 12 feet from traffic. If there is less than 500 feet between work

sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. TMA will not be measured for payment, but are incidental to "Maintain and Control Traffic," Lump Sum. The Department **WILL NOT** take possession of the TMAs upon completion of the work.

PAVEMENT MARKINGS

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

Place temporary and permanent striping in accordance with Section 112, except that:

1. Temporary and permanent striping will be 6" in width
2. If the contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved removable lane tape will be used; however removable tape will be measured and paid as Pavement Striping-Temporary Paint 6"
3. Edge lines will be required for temporary striping
4. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic
5. Place permanent striping on bridge decks and pavement within the project limits.
6. Permanent striping will be Durable Waterborne Markings

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

PAVEMENT EDGE DROP-OFFS

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

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

Less than 2" – Protect with a lane closure.

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

III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place.

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

TRAFFIC COORDINATOR

Designate an employee to be traffic coordinator. The designated Traffic Coordinator must be certified by the American Traffic Safety Services Association (ATSSA). The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

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

COORDINATION OF WORK

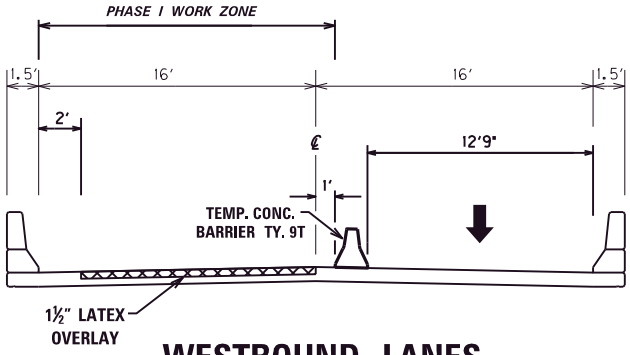
The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with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

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

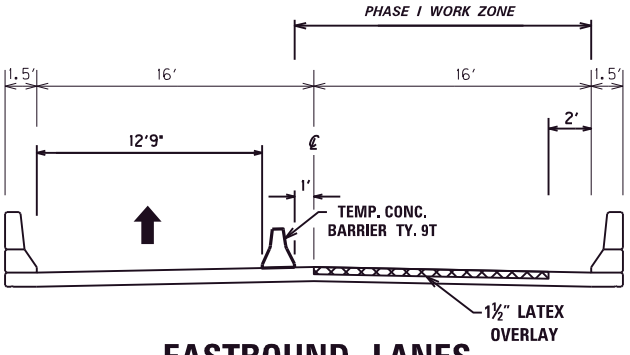
Do not use or allow employees to use median crossovers at any time except when inside lanes are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

MAINTENANCE OF TRAFFIC
BRIDGE TYPICAL SECTIONS
I–64

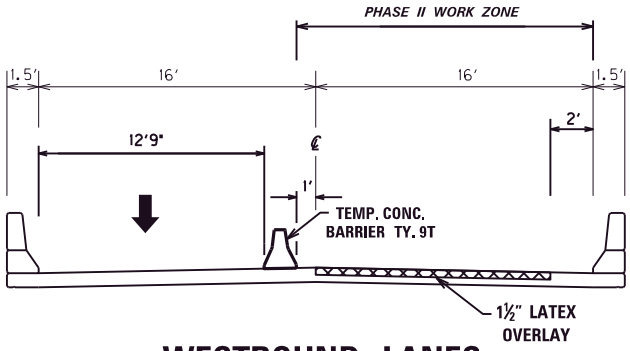


WESTBOUND LANES

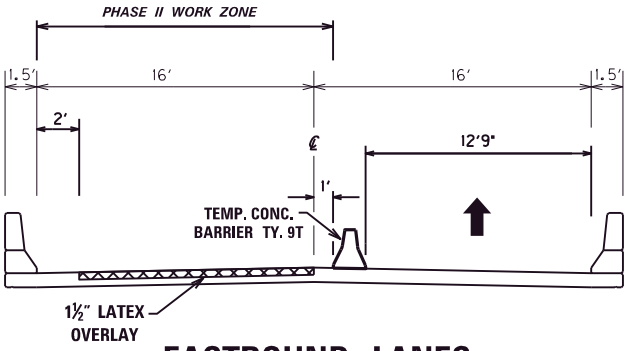


EASTBOUND LANES

PHASE I



WESTBOUND LANES



EASTBOUND LANES

PHASE II

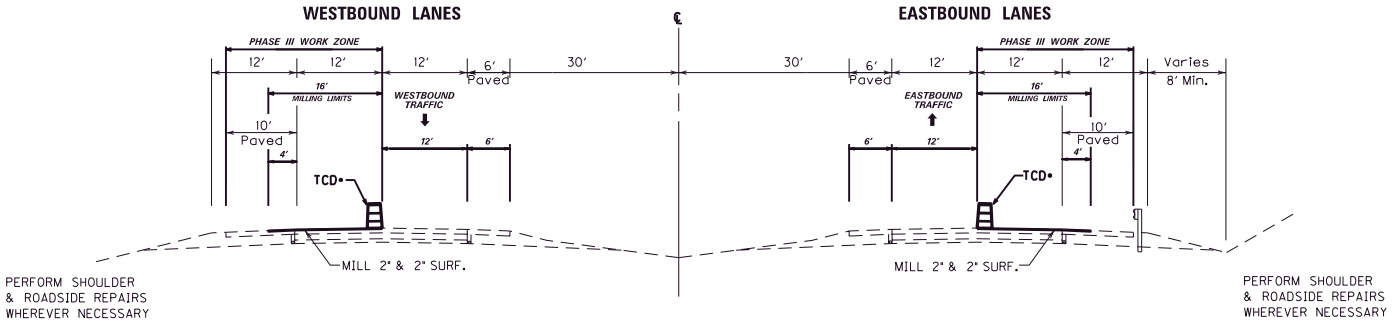
CONSTRUCT DURING THIS PHASE

NOT TO SCALE

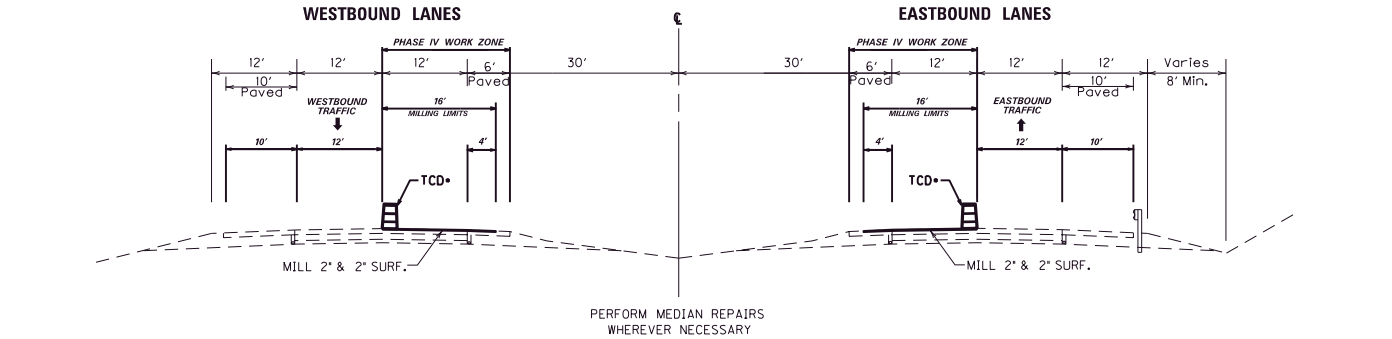
I–64
MAINTENANCE OF TRAFFIC
BRIDGE TYPICAL SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	

MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS
I–64



PHASE III



PHASE IV

•BARRELS SHALL BE MOVED ALONG WITH THE MILLING & PAVING OPERATIONS TO MINIMIZE TRAFFIC ON SHOULDERS.

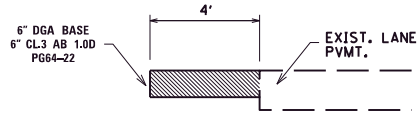
NOT TO SCALE

I–64
MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS

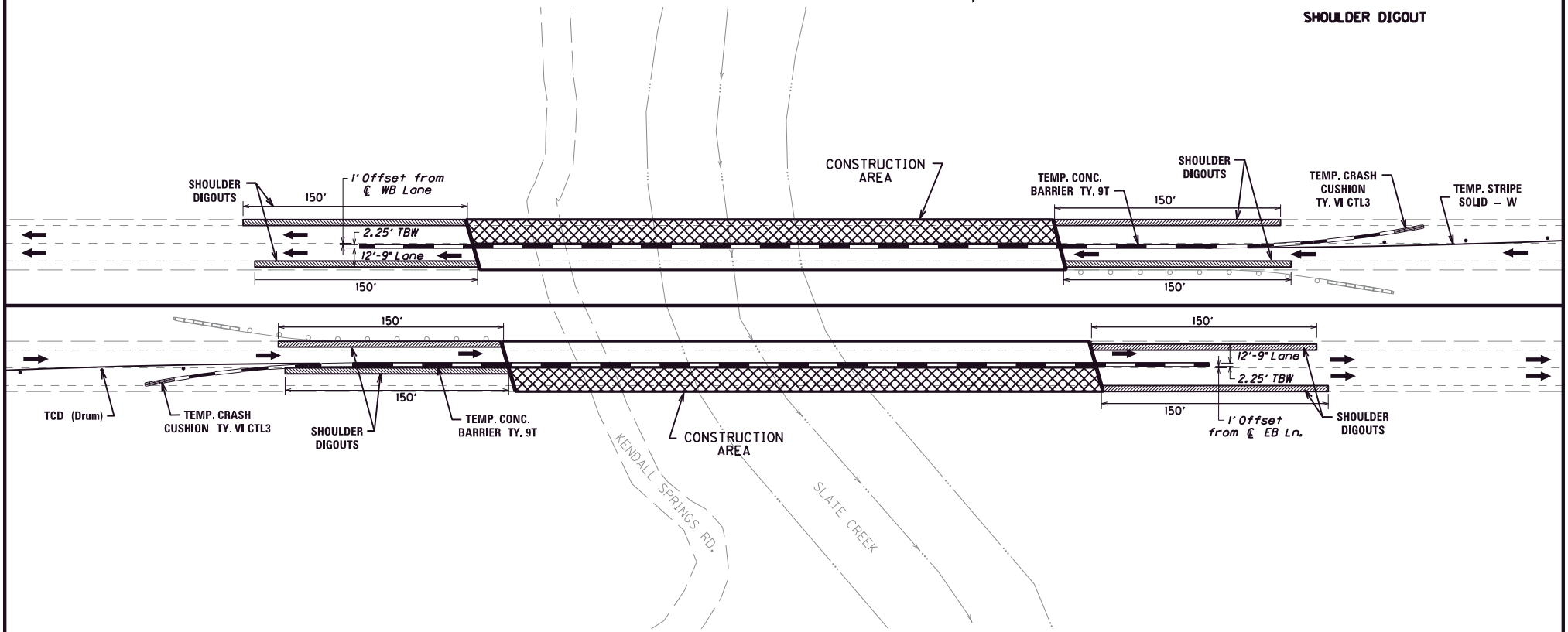
COUNTY OF	ITEM NO.
BATH	9-2023.00

PHASE I

1. INSTALL TEMPORARY LANE CLOSURE (Incidental to M.O.T.).
2. CONSTRUCT INSIDE SHOULDER DIGOUT AND PAVEMENT REPLACEMENT.
3. INSTALL LANE CLOSURE (REFER TO STANDARD DRAWING TTC–115–02).
4. INSTALL TEMPORARY CONCRETE BARRIER AND CRASH CUSHION.
5. CONSTRUCT OVERLAY ON OUTSIDE LANES.
6. CONSTRUCT OUTSIDE SHOULDER DIGOUT AND PAVEMENT REPLACEMENT.



SHOULDER DIGOUT



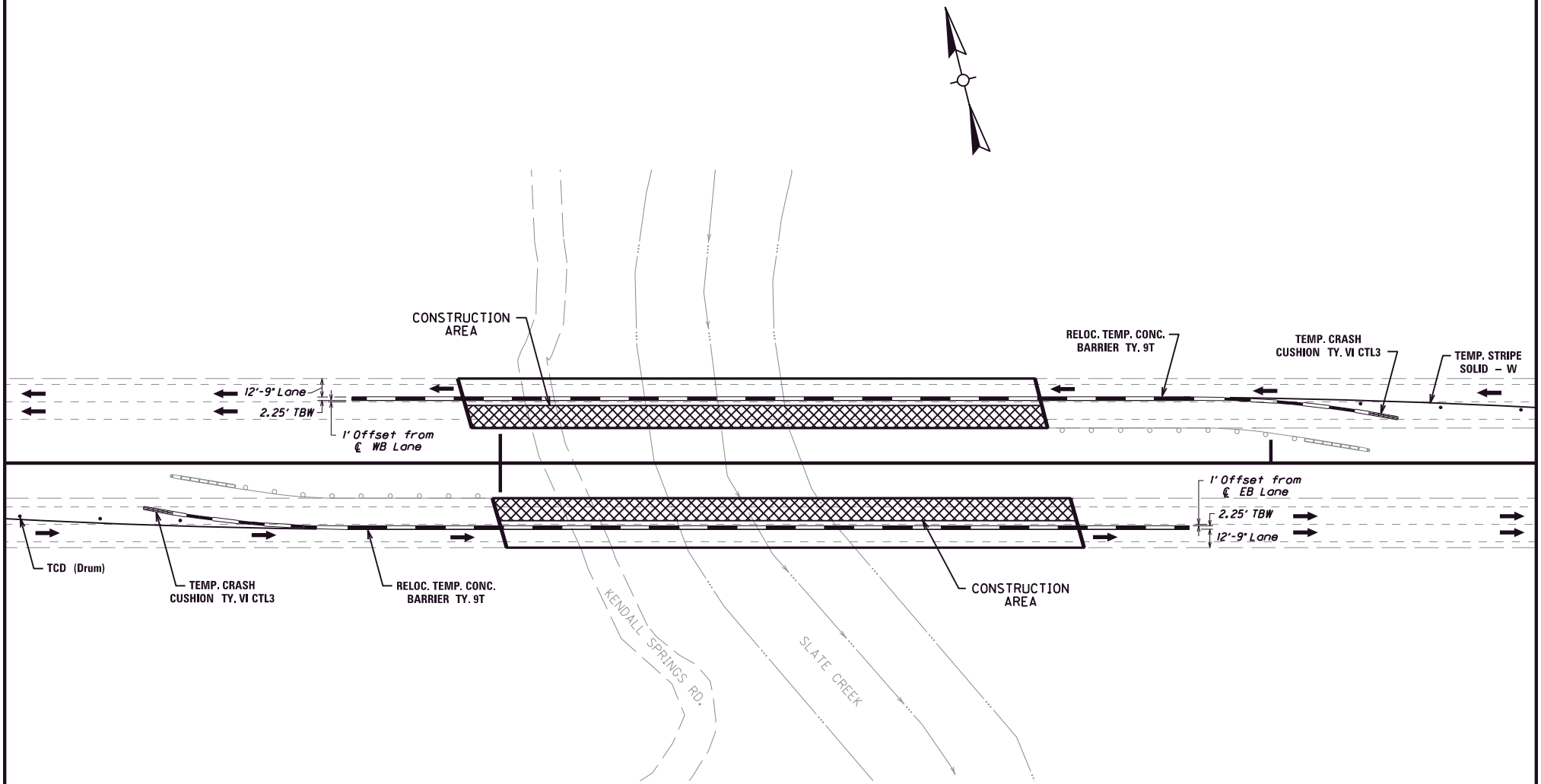
SCALE : 1" = 100'

MAINTINANCE OF TRAFFIC
I-64 MP 120 OVER
SLATE CREEK PHASE I

COUNTY OF	ITEM NO.
BATH	9-2023.00

PHASE II

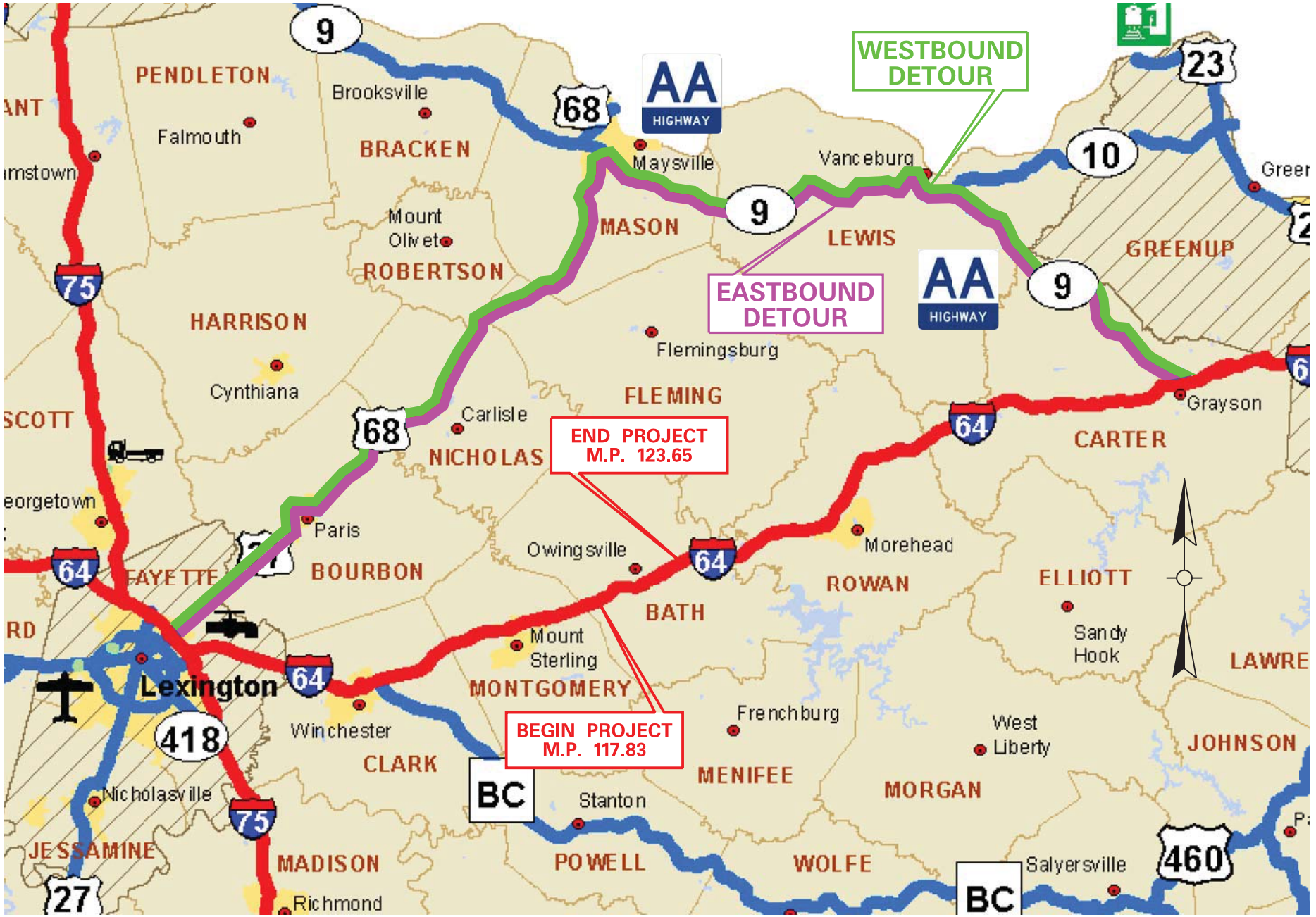
1. INSTALL LANE CLOSURE (SEE STANDARD DRAWING TTC–115–02).
2. RELOCATE TEMPORARY CONCRETE BARRIER AND CRASH CUSHION.
3. CONSTRUCT OVERLAY ON INSIDE LANES.



SCALE : 1" = 100'

MAINTINANCE OF TRAFFIC
I-64 MP 120 OVER
SLATE CREEK PHASE II

COUNTY OF	ITEM NO.	SHEET NO.
BATH	9-2023.00	



I–64 MAINTENANCE OF TRAFFIC
WIDE LOAD DETOUR ROUTE

REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012.

2. FHWA Manual on Uniform Traffic Control Devices – 2009 Edition.

3. Kentucky Department of Highways Standard Drawings, current editions, as applicable:

RBB-002-08	GUARDRAIL AND BRIDGE END DRAINAGE FOR TWIN STRUCTURES
RBB-003-02	LAYOUT OF GUARDRAIL AT TWIN STRUCTURES-DEPRESSED MEDIAN
RBB-010-04	GUARDRAIL TRANSITION FROM NORMAL SHOULDER TO NARROW BRIDGE
RBE-100-10	CRASH CUSHION TYPE VI-BT & CT
RBE-200-05	CRASH CUSHION TYPE IX
RBE-205-04	CRASH CUSHION TYPE IX-A
RBI-001-09	TYPICAL GUARDRAIL INSTALLATIONS
RBI-002-06	TYPICAL GUARDRAIL INSTALLATIONS
RBI-003-08	TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A
RBI-007-08	CRASH CUSHION TYPE IX INSTALLATION AT MEDIAN PIERS (DEPRESSED MEDIAN)
RBM-020-09	DELINEATORS FOR CONCRETE BARRIERS
RBR-001-11	STEEL BEAM GUARDRAIL (W-BEAM)
RBR-005-10	GUARDRAIL COMPONENTS
RBR-010-05	GUARDRAIL TERMINAL SECTIONS
RBR-015-04	GUARDRAIL POSTS
RBR-025-04	GUARDRAIL END TREATMENT TYPE 2A
RBR-035-09	GUARDRAIL END TREATMENT TYPE 4A
RDB-001-11	DROP BOX INLET TYPE 1
RDD-021-06	FLUME INLET TYPE 2
RDD-040-04	CHANNEL LINING CLASS II AND III
RDI-020-08	PIPE BEDDING FOR CULVERTS ENTRANCE AND STORM SEWER PIPE
RDI-021	PIPE BEDDING FOR CULVERTS ENTRANCE AND STORM SEWER REINFORCED CONC. PIPE
RDI-025-04	PIPE BEDDING TRENCH CONDITION
RDI-026	PIPE BEDDING TRENCH CONDITION REINFORCED CONC. PIPE
RDP-001-05	PERFORATED PIPE TYPES AND COVER HEIGHTS
RDP-005-04	PERFORATED PIPE FOR SUBGRADE DRAINAGE ON TWO-LANE (CLASS 2) AND MULTI-LANE ROADS
RDP-010-08	PERFORATED PIPE HEADWALLS
RDX-210	TEMPORARY SILT FENCE
RDX-220-04	SILT TRAP - TYPE A
RDX-225	SILT TRAP - TYPE B
RDX-230	SILT TRAP - TYPE C

RPM-100-09	CURB AND GUTTER, CURBS AND VALLEY GUTTER
TPM-105-02	PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS
TPM-125-02	PAVEMENT MARKER ARRANGEMENT EXIT-GORE AND OFF-RAMP
TPM-130-02	PAVEMENT MARKER ARRANGEMENTS ON-RAMP WITH TAPERED ACCELERATION LANE
TPM-135-02	PAVEMENT MARKER ARRANGEMENT ON-RAMP WITH PARALLEL ACCELERATION LANE
TTC-115-02	LANE CLOSURE MULTI-LANE HIGHWAY CASE I
TTC-120-02	LANE CLOSURE MULTI-LANE HIGHWAY CASE II
TTC-135-01	SHOULDER CLOSURE
TTD-110-01	POST SPLICING DETAIL
TTD-120	WORK ZONE SPEED LIMIT AND DOUBLE FINE SIGNS
TTD-125	PAVEMENT CONDITION WARNING SIGNS
TTS-110-01	MOBILE OPERATION FOR PAINT STRIPING CASE III
TTS-115-01	MOBILE OPERATION FOR PAINT STRIPING CASE IV

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

Special Note 1I	Portable Changeable Message Signs *attached*
Special Note	Special Note for use of MTV *attached*
Special Note	Waterblasting Striping Removal *attached*
Special Note	Typical Section Dimensions *attached*
Special Note	Before You Dig *attached*
Special Note	Guardrail Delivery Verification Sheet *attached*
Special Note	Fixed Completion Date and Liquidated Damages *attached*
Special Note	Erosion Prevention and Sediment Control *attached*
Special Note	Asphalt Milling and Texturing *attached*
Special Note	Inlaid Pavement Markers (Experimental) *attached*
Special Note	Longitudinal Pavement Joint Adhesive *attached*
Special Note	Installation of Traffic Counting Inductance Loops and Axle Sensors *attached*
Special Note	Bridge Repair Items *attached*
Special Note	Geotechnical Notes for Slide Repair *attached*
General Note 444	Asphalt Pavement Ride Quality *attached*
General Note 447	Compaction of Asphalt Mixtures *attached*

SPECIAL NOTE FOR MATERIAL TRANSFER VEHICLE (MTV)

Provide and use a MTV in accordance with Sections 403.03.10 and 403.03.05.

SPECIAL NOTE FOR WATERBLASTING STRIPING REMOVAL

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

1.0 DESCRIPTION. Remove pavement striping, temporary or permanent, from asphalt or concrete pavement using ultra-high pressure water.

2.0 MATERIALS AND EQUIPMENT.

2.1 Truck Mounted Ultra-high Pressure Pump and Water Tank. Use a truck having a separate hydrostatic transmission capable of speed increments of ±1 foot per minute at operator's discretion. Use a pump capable of delivering a minimum of 30,000 psi to a bumper mounted deck containing an operator controlled rotating manifold that is speed variable up to at least 3,000 rpm and accepts interchangeable waterjet nozzles. Provide all necessary waterjet nozzle setups and patterns to ensure clean sufficient removal. Ensure the deck's discharge directs the water and removal material in a manner that is not hazardous to vehicles or pedestrians.

2.2 Water. Conform to Section 803.

3.0 CONSTRUCTION. Before starting work, provide the Engineer with a contractor work history of 2 projects where striping removal was completed acceptably for a similar type of pavement. If no history is available, complete 1,000 linear feet of striping removal and obtain the Engineer's approval before continuing.

Conduct striping removal under lane closures meeting the conditions of the MUTCD and Kentucky Standard Drawings and Specifications. Waterblast to remove temporary or permanent striping completely as the Engineer directs. Do not damage the pavement in any way and protect all joint seals. If damage is observed, stop the removal process until the operator can make changes and demonstrate acceptable striping removal. Repair any damage to the pavement. Vacuum all marking material and removal debris concurrently with the blasting operation.

4.0 MEASUREMENT. The Department will measure the quantity in linear feet. When the removal area's width exceeds 8 inches and a second pass is required, the Department will measure the length of the additional pass for Payment. The Department will not measure for payment additional passes for widths of 8 inches or less or passes to further eradicate markings. The Department will not measure repair of damaged pavement for payment and will consider it incidental to this item of work.

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

Code	Pay Item	Pay Unit
22664EN	Water Blasting Existing Stripe	Linear Foot

The Department will consider payment as full compensation for all work required under this note.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS
I-64

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

SPECIAL NOTE FOR BEFORE YOU DIG

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

Guardrail Delivery Verification Sheet

Item No. 9-2023.00

Guardrail, End Treatment, Terminal Section or Post Type	Unit	Field Verified Amount	Delivered Amount
Guardrail-Steel W Beam	LF		
Temporary Guardrail	LF		
Guardrail Terminal Section	Each		
Guardrail Terminal Section	Each		
Crash Cushion Type Ix-A	Each		
Guardrail End Treatment Type 1	Each		
Guardrail End Treatment Type 2a	Each		
Guardrail End Treatment Type 3	Each		
Guardrail End Treatment Type 4a	Each		
Guardrail End Treatment Type 7	Each		
Guardrail Connector To Bridge End	Each		
Guardrail Connector To Conc Med Barr	Each		
Guardrail Connect-Shld Bridge Pier	Each		
Steel Offset Blocks	Each		
Steel Guardrail Post	Each		

Removed guardrail, end treatments, terminal sections, and posts shall be delivered to the Central Sign Shop and Recycle Center in Frankfort, KY (502-564-8187) between the hours of 8:00 AM and 3:30 PM Monday through Friday and shall be neatly stacked in accordance with section 719.03.07 of the standard specifications. Contractor, engineer, and Central Sign Shop and Recycle Center representative must all sign off on this sheet before payment may be made.

	Printed Name	Signature	Date
Resident Engineer (or Representative)			
Contractor (or Representative)			
Central Sign Shop and Recycle Center Representative			

Special Note for Fixed Completion Date and Liquidated Damages
I-64
Bath County
FD04 SPP 006 0064 117-124
Item No. 9-2023.00

Contrary to Section 108.09, Liquidated Damages of $5,000 per calendar day will be assessed for each day work remains uncompleted beyond the Specified Project Completion Date. This project has a Fixed Project Completion Date of July 31, 2013.

In addition to the Liquidated Damages specified in Section 108.09, Liquidated Damages of $10,000 per calendar day will be charged when a lane closure remains in place during any prohibited period outlined in the Traffic Control Plan. The $10,000 per calendar day Liquidated Damages shall also apply if a lane closure remains in place outside of the 22 day continuous lane closure period permitted for bridge deck overlay construction, as outlined in the Traffic Control Plan.

If work is delayed by inclement weather, the minimum work required to allow removal of the lane closure, as directed by the Engineer, shall be resumed immediately as soon as weather permits or the Department will begin to assess Liquidated Damages as specified herein.

Contrary to Section 108.09 of the Standard Specifications, **the disincentive fee will be charged during those periods when seasonal limitations of the Contract prohibit the Contractor from working on a controlling item or operation. This includes the months from December through March.**

All liquidated damages will be applied cumulatively.

All other applicable portions of Section 108 apply.

Special Note for
Erosion Prevention and Sediment Control
Item 9-2023.00: I-64 Pavement Rehabilitation – Bath Co.

The Contractor shall be responsible for filing the Kentucky Pollution Discharge Elimination System (KPDES) KYR10 permit Notice of Intent (NOI) with the Kentucky Division of Water (DOW) and any KPDES local Municipal Separate Storm Sewer System (MS4) program that has jurisdiction. The NOI shall name the contractor as the Facility Operator and include the KYTC Contract ID Number (CID) for reference.

The Contractor shall perform all temporary erosion/sediment control functions including: providing a Best Management Practice (BMP) Plan, conducting required inspections, modifying the BMP plan documents as construction progresses and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit effective on _____or a permit re-issued to replace that KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC 2012 Department of Highways, Standard Specifications for Road and Bridge Construction.

Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 213 of KYTC 2012 Department of Highways, Standard Specifications for Road and Bridge Construction. The Engineer's inspections shall be performed a minimum of once per month and within seven days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the contractor unless improvements to the BMP's are required. The contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within 5 days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit.

Contrary to Section 213.05, bid items for temporary BMPs will not be listed and will be replaced with one lump sum item for the services. Payment will be pro-rated based on the Project Schedule as submitted by the Contractor and as agreed to by the Engineer.

The contractor shall be responsible for applying "good engineering practices" as required by the KPDES permit. The contractor may use any temporary BMPs with the approval of the KYTC Engineer.

The contractor shall provide the Engineer copies of all documents required by the KPDES permit at the time they are prepared.

The contractor shall be responsible for the examination of the soils to be encountered and make his own independent determination of the temporary BMPs that will be required to accomplish effective erosion prevention and sediment control.

The Contractor shall be responsible for filing the KPDES permit Notice of Termination (NOT) with the Kentucky DOW and any local MS4 program that has jurisdiction. The NOT shall be filed after the Engineer agrees that the project is stabilized or the project has been formally accepted.

Payment: Payment will be at the contract unit price for K.P.D.E.S Permit & Temporary Erosion Control: Lump Sum.

Special Note for
Asphalt Milling and Texturing

Begin paving operations immediately after the milling operation. Continue paving operations continuously until completed. Do not allow public traffic to drive on milled surfaces. If paving operations are not begun within this time period, liquidated damages will be assessed at the rate prescribed by Section 108.09 of the current Standard Specifications until such time as paving operations are begun.

Contrary to Section 408 of the current Standard Specifications, the material obtained from the milling operations shall become the property of the Department. Deliver this material to the following Maintenance Facilities:

Bath County – 1500 Tons

Nicholas County – 1000 Tons

Mason County – 750 Tons

The Contractor, at his option, may elect to keep this material at an agreed cost of $7.50 per ton. The cost to the Contractor for this material will be deducted from money due on the contract.

Notice to Contractor
Transfer of millings to the state maintenance facilities is considered a part of the construction project, therefore truck operators are subject to receiving prevailing wages.

SPECIAL NOTE FOR INLAID PAVEMENT MARKERS (EXPERIMENTAL)
FD04 SPP 006 0064 117-124
Item 9-2023.00: I-64 Pavement Rehabilitation – Bath Co.

I. DESCRIPTION.

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

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

II. MATERIALS.

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

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

B. Markers. Use Marker One Model R-100 or approved equal, mono-directional white. Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer’s current recommendations for adhesives and installation procedures. Use one brand and design throughout the project.

C. Adhesives. Use adhesives that conform to the manufacturer’s recommendations.

III. CONSTRUCTION.

A. Experimental Evaluation. The University of Kentucky Transportation Center will be evaluating this experimental installation of IPMs. Notify the Engineer a minimum of 14 calendar days prior to beginning work. The Engineer will coordinate the University’s activities with the Contractor’s work.

B. Maintain and Control Traffic. See Traffic Control Plan.

C. Installation. Install IPMs in recessed grooves cut into the final course of asphalt pavement according to the manufacturer’s recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent tearing or raveling. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

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

D. Location and Spacing. Install the markers in the pattern for High Reflectivity Option with two (2) IPMs per groove. Locate and space markers as shown on the drawing. Do not install markers on bridge decks. Do not install a marker on top of a pavement joint or crack. Offset the recessed groove a minimum of 2 inches from any longitudinal pavement joint or crack and at least one inch from the painted stripe, ensuring that the finished line of markers is straight with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.

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

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

E. Disposal of Waste. Dispose of all removed asphalt pavement, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.

F. Restoration. Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.

G. On-Site Inspection. Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.

H. Caution. Do not take information shown on the drawings and in this proposal and the types and quantities of work listed as an accurate or complete evaluation of the material and conditions to be encountered during construction, but consider the types and quantities of work listed as approximate only. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation or extension of Contract time if the conditions encountered are not in accordance with the information shown.

IV. MEASUREMENT.

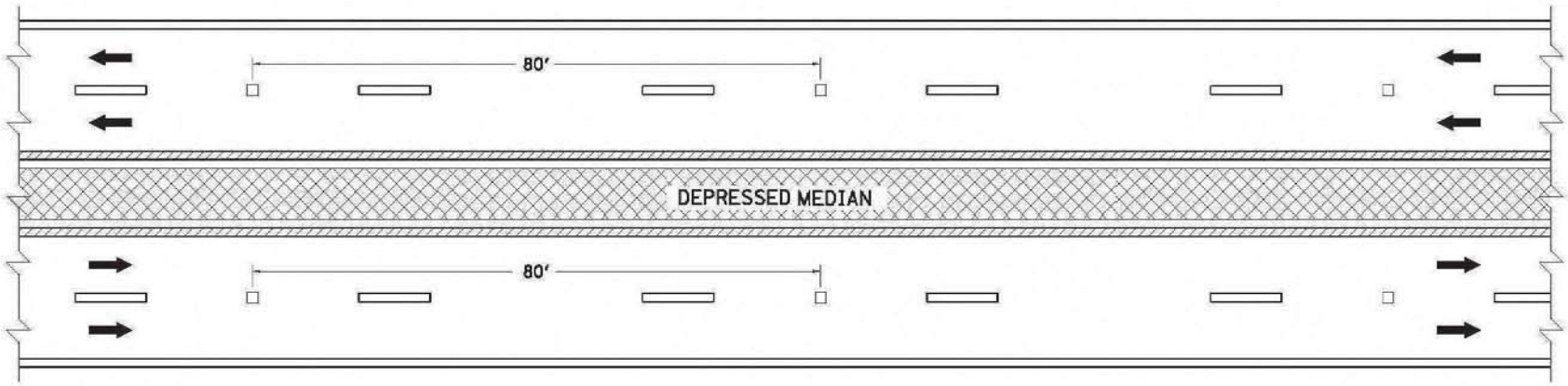
A. Maintain and Control Traffic. See Traffic Control Plan.

B. Inlaid Pavement Markers. The Department will measure only the bid items listed. The Department will measure the quantity of IPMs of each type by individual marker, Each. The Department will not measure grooving pavement, removal of asphalt cuttings and debris, preheating pavement to remove moisture, adhesives, or lenses, but shall be incidental to the Inlaid Pavement Markers.

V. PAYMENT.

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

B. Inlaid Pavement Markers. The Department will make payment for the completed and accepted quantity of IPMs Markers at the Contract unit price, Each. Accept payment as full compensation for all labor, equipment, materials, and incidentals to accomplish this work to the satisfaction of the Engineer.



(DIVIDED HIGHWAY WITH DEPRESSED OR RAISED MEDIAN LESS THAN 30' IN WIDTH)

GENERAL NOTES

1. MARKERS INSTALLED ALONG LANE LINES SHOULD BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
2. MARKERS SHOULD NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2' FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED AT THE DISCRETION OF THE ENGINEER.

LEGEND

- MONO-DIRECTIONAL (WHITE)
- MARKINGS (YELLOW)
- MARKINGS (WHITE)
- DEPRESSED OR RAISED MEDIAN

DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS

PAVEMENT MARKER
ARRANGEMENTS
MULTI-LANE ROADWAYS

Bath County
I-64
FD04 SPP 006 0064 117-124

SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

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

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1 or 2.1.2.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 3236
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

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

2.1.2 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Softening Point[1] ,° F	176 min.	AASHTO T 53
Cone Penetration[2], 77 ° F	20-60	ASTM D 5329
Flow[1], 140 ° F (mm)	5.0 max.	ASTM D 5329
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329
Asphalt Compatibility	Pass	ASTM D 5329
Resilience[2], 77 ° F (%)	30 min.	ASTM D 5329
Slump Test[1], 300 ° F (mm)	2.0 max.	ASTM D 2202

[1] Cold sample forced into molds at 325 ° F.
[2] Field sample extruded into mold at application temperature.

Ensure the temperature of the pavement joint adhesive is between 300 and 350 °F when the material is extruded in a 0.20 to 0.40-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

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

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

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

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air. Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

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

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

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

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. The Department will not measure for payment any extra materials, labor, methods,

equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.

5. PAYMENT. The Department will pay for the Pavement Joint Adhesive at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 ° F (Pa•s) ASTM D 3236	4.0-10.0	3.5-10.5	3.0-3.4 10.6-11.0	2.5-2.9 11.1-11.5	2.0-2.4 11.6-12.0	≤ 1.9 ≥ 12.1
Cone Penetration, 77 ° F ASTM D 5329	60-100	57-103	54-56 104-106	51-53 107-109	48-50 110-112	≤ 47 ≥ 113
Flow, 140 ° F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 ° F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 ° F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, ° F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Joint Adhesive Referenced in Subsection 2.1.2						
Flow, 140 ° F (mm) ASTM D 5329	≤ 5	5.1-5.2	5.3-5.4	5.5-5.6	5.7-5.8	≥ 5.9
Resilience, 77 ° F (%) ASTM D 5329	≥ 30	29	28-27	26-25	24-23	≤ 22
Softening Point, ° F AASHTO T 53	≥ 176	≥ 174	171-173	168-170	165-167	≤ 164
Cone Penetration, 77 ° □F ASTM D 5329	20-60	18-62	16-17 63-64	14-15 65-66	12-13 67-68	≤ 11 ≥ 69
Tensile Adhesion, 77 ° F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Slump Test, 300 ° F (mm) ASTM D 2202	≥ 2.0	≤ 2.5	2.6-3.0	3.1-3.5	3.6-4.0	≥ 4.1
Asphalt Compatibility, ASTM D 5329	Pass					

CODE	PAY ITEM	PAY UNIT
20071EC	Joint Adhesive	Linear Feet

BATH CO. I-64 m.p. 122.0
STATION 288
FIGURE 1

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

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

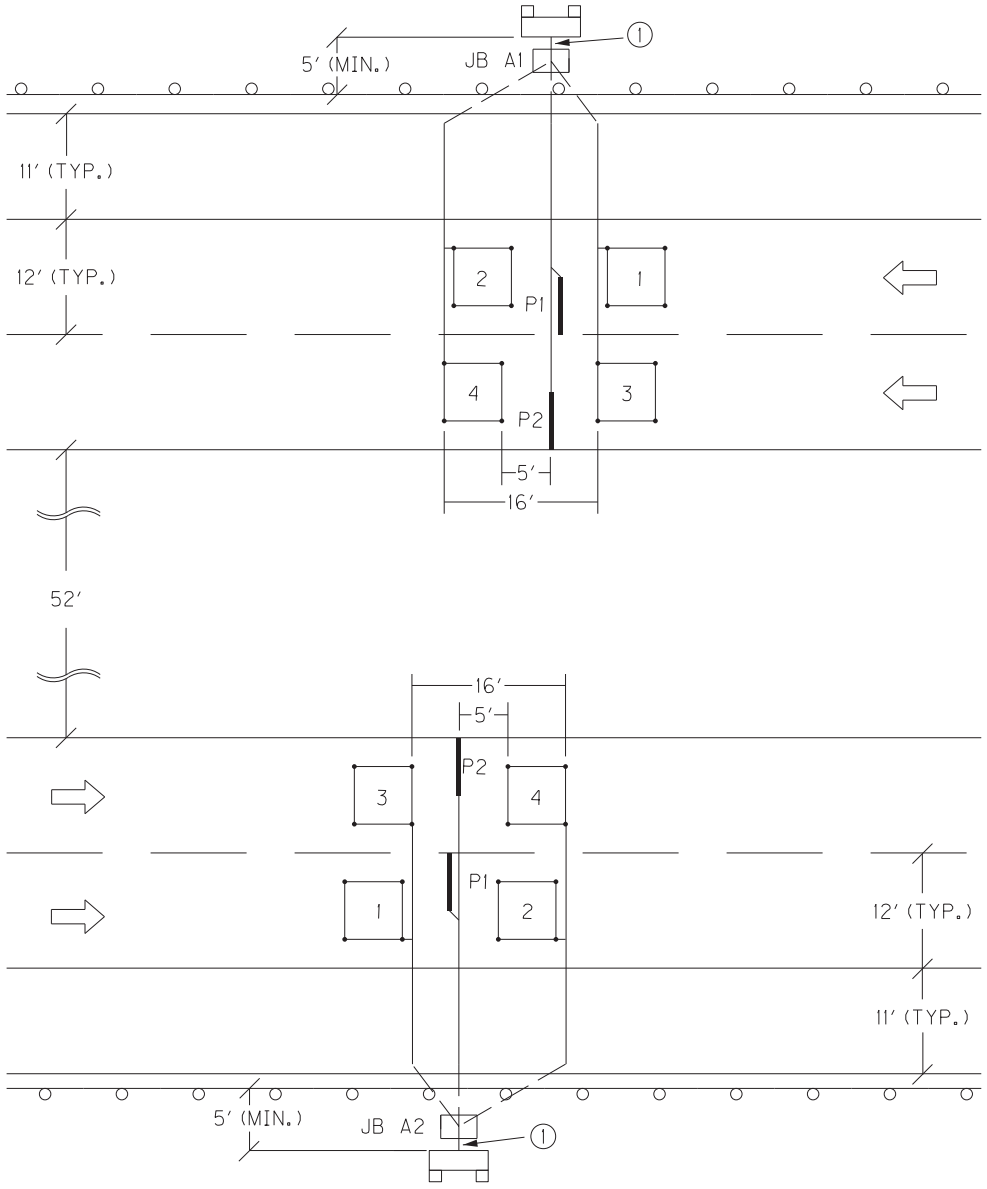
INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

INSTALL TWO (2) TYPE A JUNCTION BOXES (JB A1, JB A2).

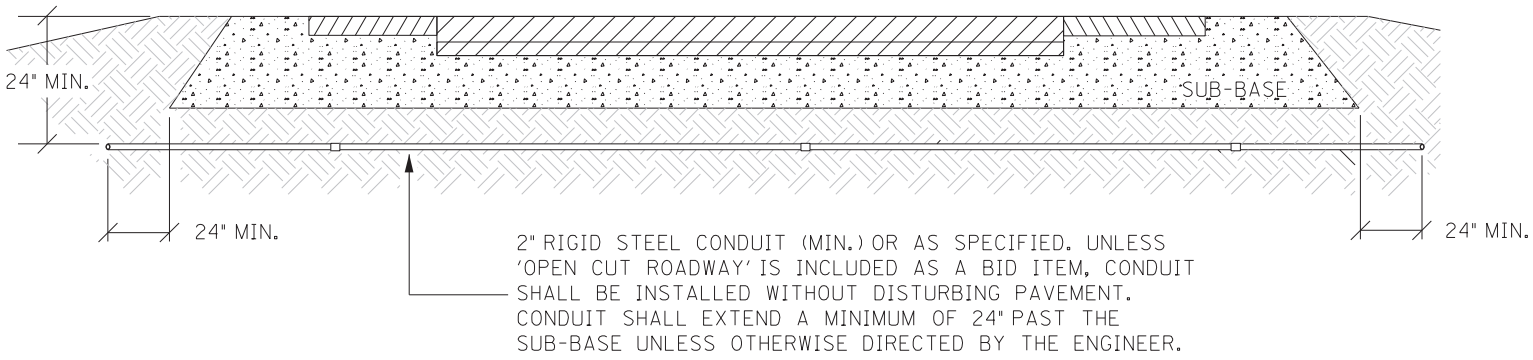
INSTALL TWO (2) 20"X20"X8" CABINETS MOUNTED TO TWO (2) WOOD POSTS EACH.

CODED NOTE:

(1) INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=30'

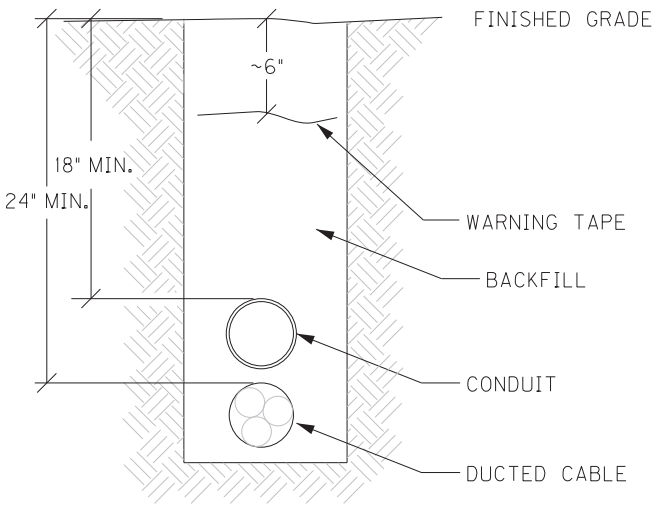


CONDUIT UNDER PAVEMENT

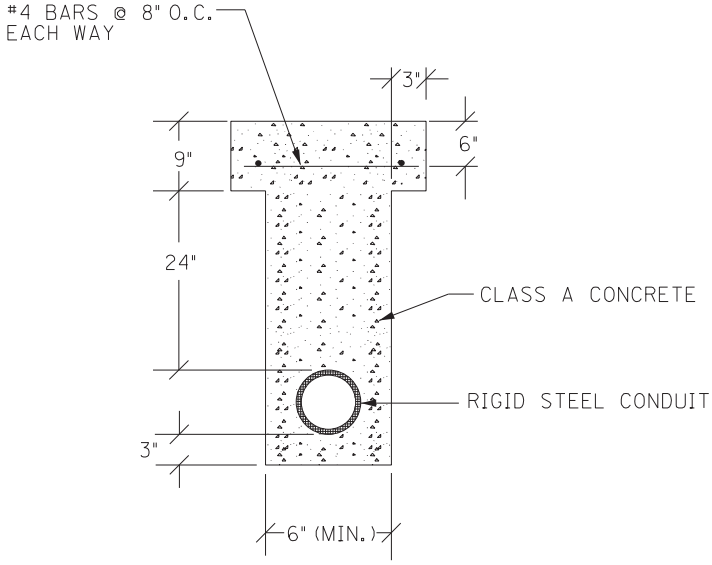
TOTAL TRENCH WIDTH SHALL BE 3" (NOM.) WIDER THAN THE SUM OF THE OUTSIDE DIAMETER(S) OF THE CONDUIT(S) INSTALLED. CONDUIT(S) SHALL BE CENTERED IN TRENCH.

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

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



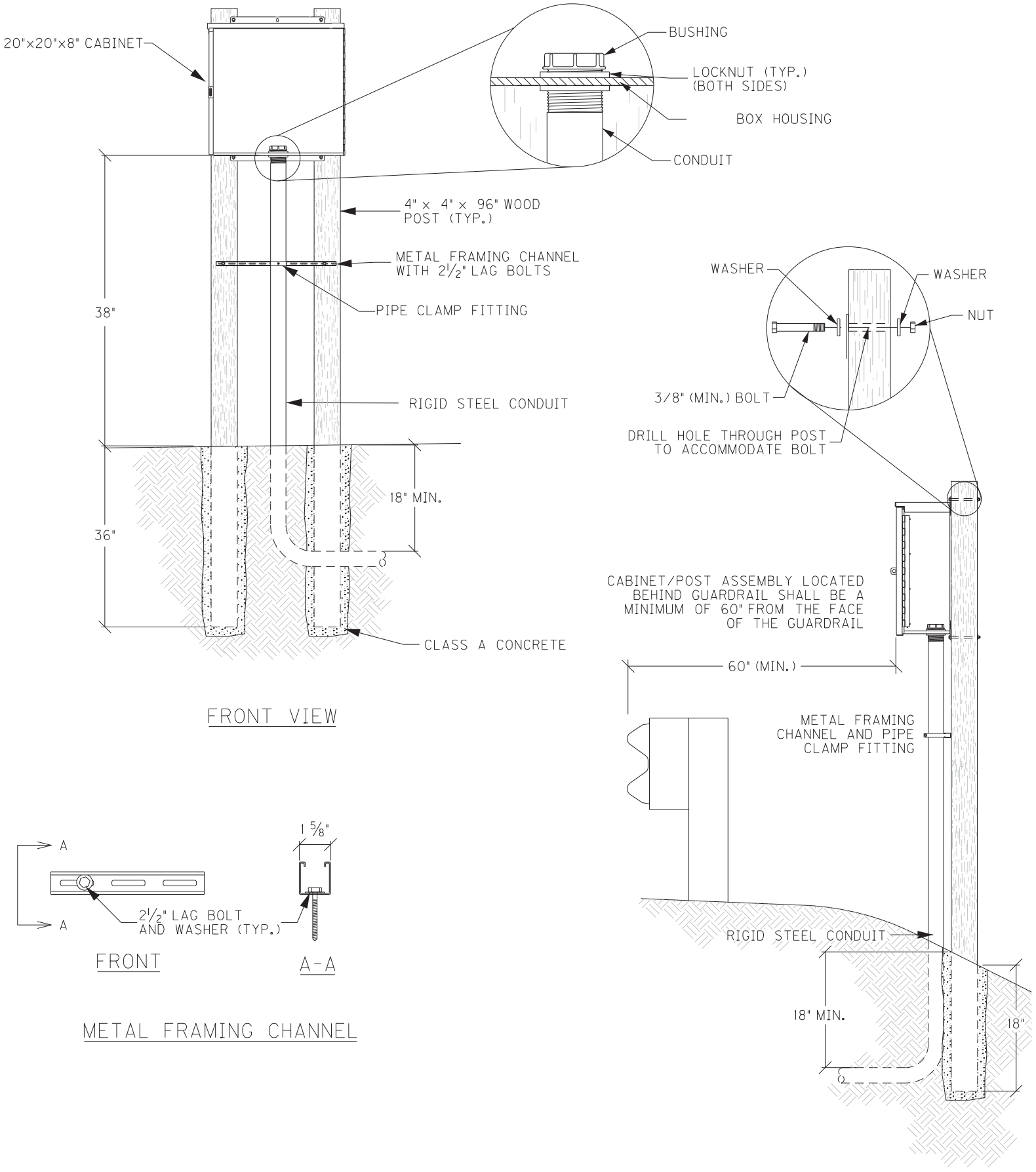
CONDUIT TRENCH



OPEN CUT PAVEMENT DETAIL

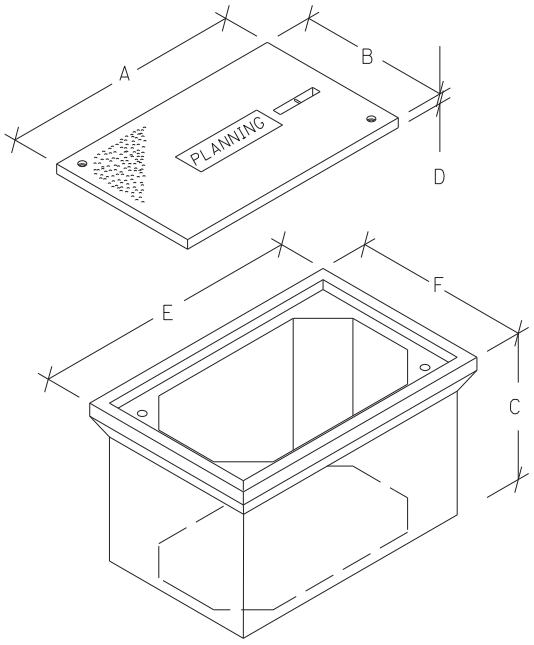
CONDUIT INSTALLATION

NOT TO SCALE



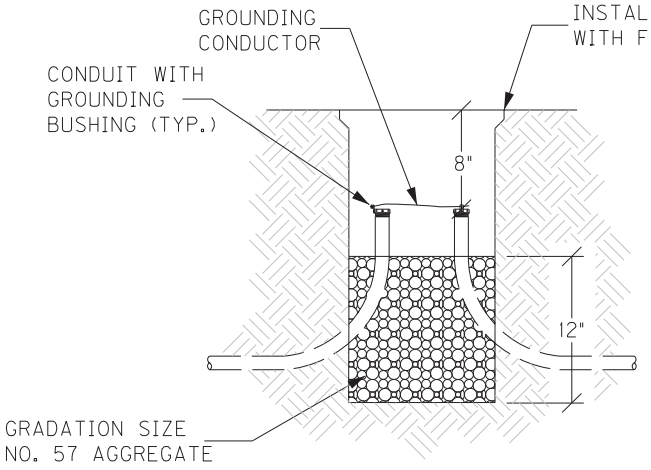
GALVANIZED STEEL CABINET
DOUBLE POST ASSEMBLY

NOT TO SCALE



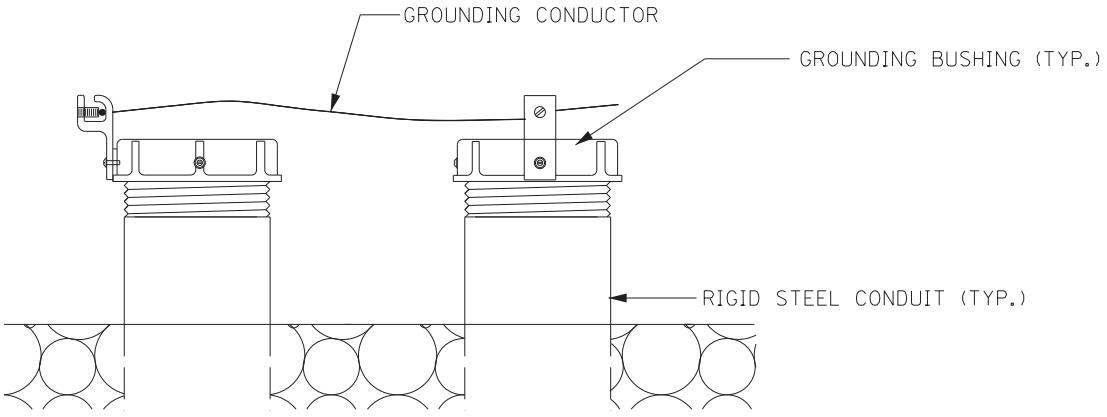
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D*	E	F
TYPE A	23"	14"	18"	2"	25"	16"
TYPE B	18"	11"	12"	1¾"	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
STACKABLE BOXES ARE PERMITTED



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

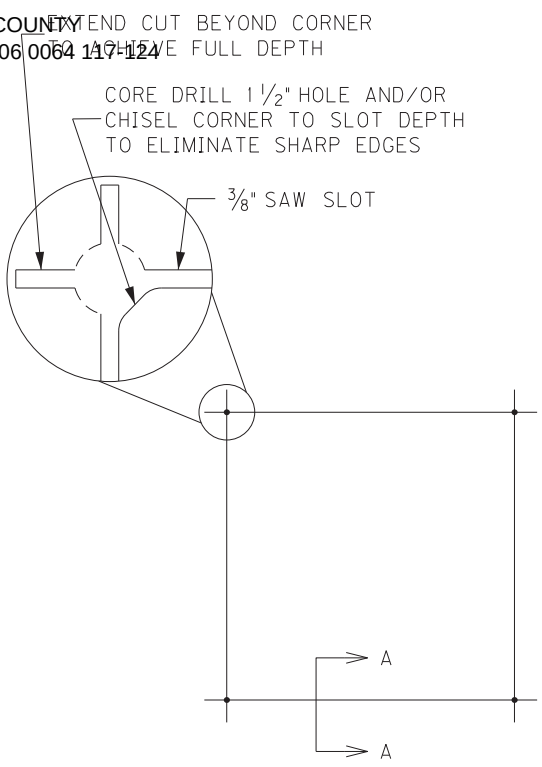
ELEVATION



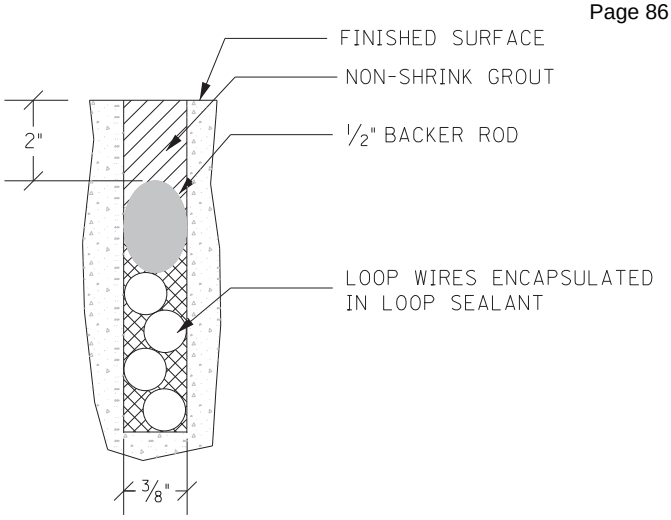
GROUNDING DETAIL

JUNCTION BOX - TYPE A, TYPE B, TYPE C

NOT TO SCALE



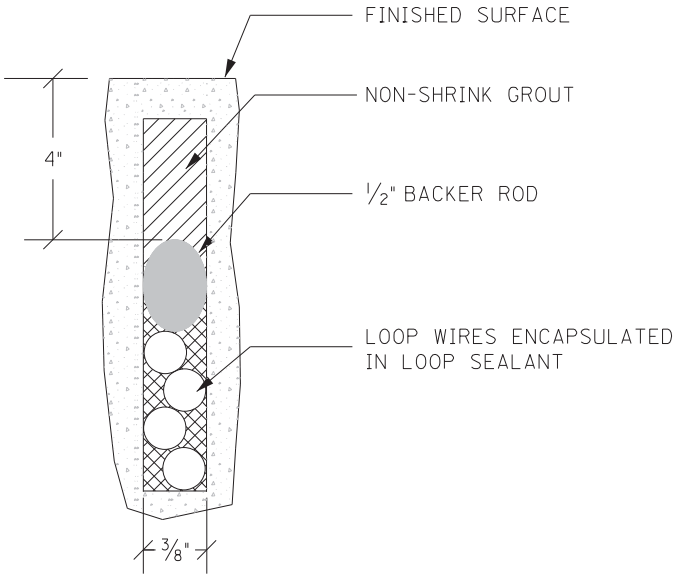
SAW CUT PLAN



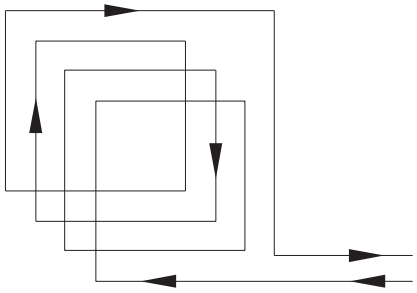
SECTION A-A (CONCRETE)

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

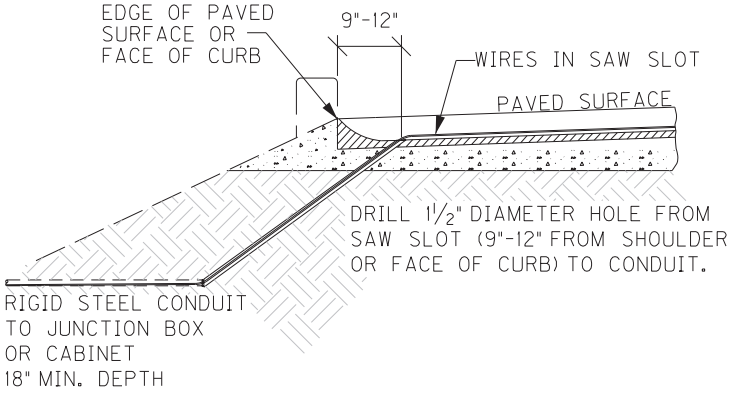
ADJACENT SAW SLOTS SHALL BE A MINIMUM OF 12" APART.



SECTION A-A (ASPHALT)



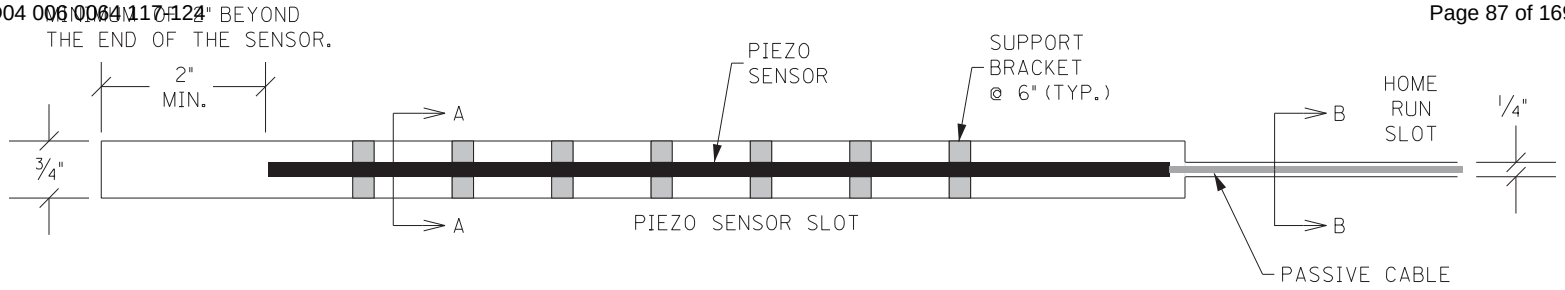
WIRING PLAN



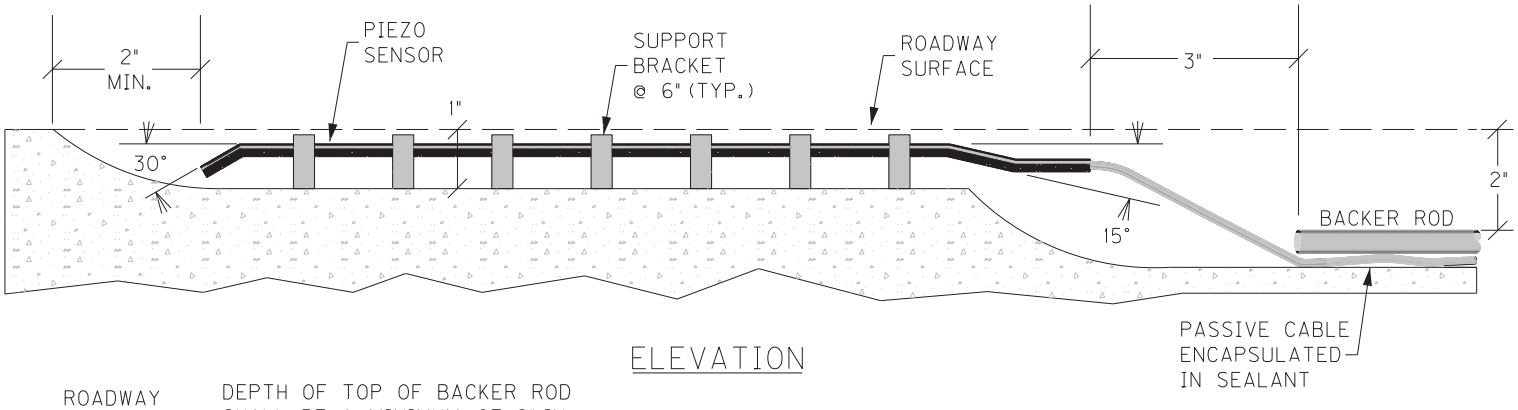
SAW SLOT EDGE OF PAVEMENT TRANSITION

INDUCTIVE LOOP DETECTOR

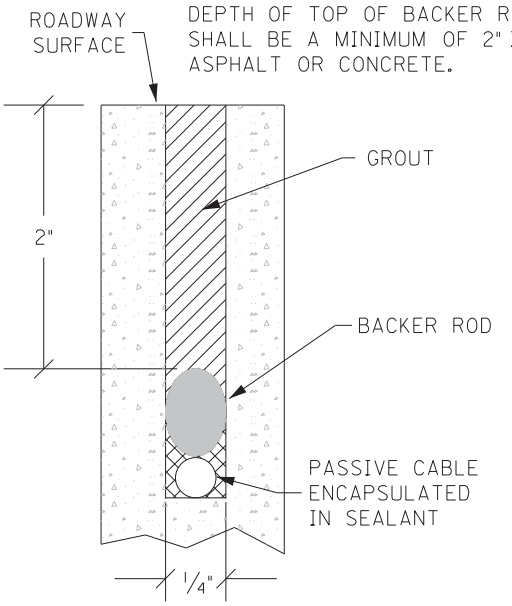
NOT TO SCALE



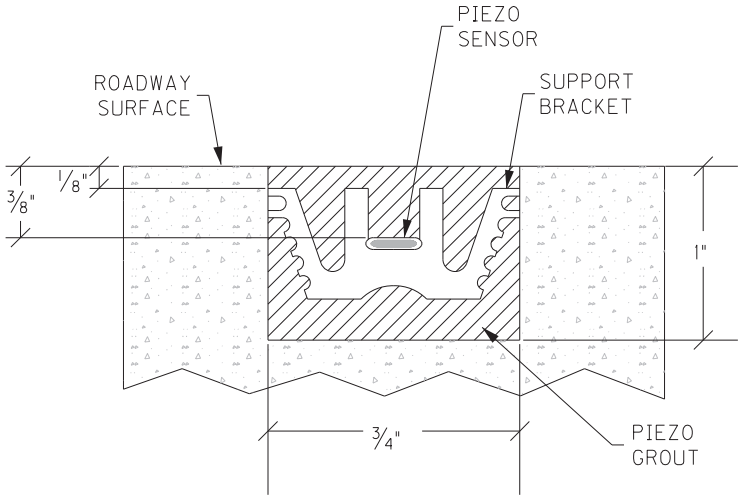
PLAN



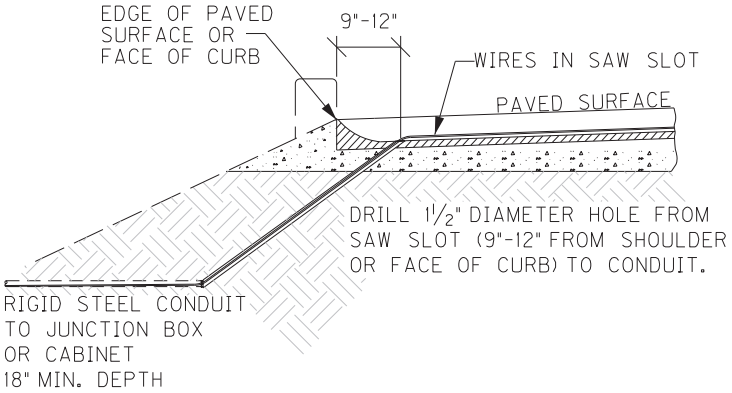
ELEVATION



SECTION B-B



SECTION A-A



SAW SLOT EDGE OF PAVEMENT TRANSITION

PIEZOELECTRIC SENSOR INSTALLATION

NOT TO SCALE

PERMANENT TRAFFIC DATA ACQUISITION STATIONS
ESTIMATE OF QUANTITIES

Bid Item Code	Description	Unit	Quantity
2562	SIGNS	SQ FT	
2650	MAINTAIN AND CONTROL TRAFFIC	LP SUM	
2775	FLASHING ARROW	EACH	
4791	CONDUIT ¾ INCH	LIN FT	
4793	CONDUIT 1 ¼ INCH	LIN FT	50
4795	CONDUIT 2 INCH	LIN FT	20
4810	JUNCTION BOX	EACH	
4811	JUNCTION BOX TYPE B	EACH	
4820	TRENCHING AND BACKFILLING	LIN FT	60
4821	OPEN CUT ROADWAY	LIN FT	
4829	PIEZOELECTRIC SENSOR	EACH	4
4830	LOOP WIRE	LIN FT	1500
4850	CABLE NO. 14/1 PAIR	LIN FT	
4871	POLE – 35’ WOODEN	EACH	
4895	LOOP SAW SLOT AND FILL	LIN FT	365
4899	ELECTRICAL SERVICE	EACH	
4901	TELEPHONE SERVICE	EACH	
20213EC	INSTALL PAD MOUNT ENCLOSURE	EACH	
20359EC	GALV STEEL CABINET	EACH	2
20360ES818	WOOD POST	EACH	4
20391ES835	JUNCTION BOX TYPE A	EACH	2
20392ES835	JUNCTION BOX TYPE C	EACH	
20468EC	JUNCTION BOX 10x8x4	EACH	
21543EN	BORE AND JACK PIPE – 2 IN	LIN FT	
23206EC	INSTALL CONTROLLER CABINET	EACH	

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

1. DESCRIPTION

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

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

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

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

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

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

2. MATERIALS

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

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

2.1. Anchoring

2.1.1. Anchor and Anchor Rod

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

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

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

2.1.2. Guy Wire and Guy Guard

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

2.1.3. Strandvise for Guy Wire

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

2.2. Asphalt

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

2.3. Backer Rod

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

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

2.4. Cabinets

2.4.1. Galvanized Steel Cabinet

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

The cabinet shall be equipped with the following:

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

2.4.2. Anchor Bolt for Pad Mounted Cabinet

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

2.5. Concrete

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

2.6. Conduit and Conduit Fittings

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

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

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

2.7. Conduit sealant

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

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

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

2.8. Electrical Service Meter Base

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

2.9. Electrical Service Disconnect

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

2.10. Flashing Arrow

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

2.11. Ground Fault Circuit Interrupter (GFCI) Receptacle

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

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

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

2.12. Grounding

2.12.1. Ground Rod

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

2.12.2. Ground Rod Clamp

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

2.13. Grout

2.13.1. Grout for Inductive Loop Installation

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

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

2.13.2. Grout for Piezoelectric Sensor Installation

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

2.14. Hardware

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

2.14.1. Conduit Strap

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

2.14.2. Mounting Strap for Pole Mount Cabinet

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

2.14.3. Metal Framing Channel and Fittings

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

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

2.15. Junction Box

2.15.1. Junction Box Type A, B, or C

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

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

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

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

2.15.3. Junction Box 10x8x4

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

2.16. Maintain and Control Traffic

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

2.17. Piezoelectric Sensor

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

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

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

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

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

2.18. Saw Slot Sealant

Saw Slot Sealant shall be non-shrink, non-stringing, moisture cure, polyurethane encapsulant suitable for use in both asphalt and concrete pavements. It shall provide a void-free encapsulation for detector loop cables and adequate compressive yield strength and flexibility to withstand heavy vehicular traffic and normal pavement movement.

The cured encapsulant shall meet or exceed the following:

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

2.19. Seeding and Protection

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

2.20. Signs

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

2.21. Splicing Materials

2.21.1. Electrical Tape

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

2.21.2. Splice Kit

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

2.22. Steel Reinforcing Bar

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

2.23. Terminal Block

Terminal block shall be rated for a minimum of 300 V and have a minimum of six terminal pairs with 9/16-inch nominal spacing (center to center) for connecting loop and piezoelectric sensor wires to cable assemblies. Terminal block shall have screw type terminal strips to accommodate wire with spade-tongue ends.

2.24. Warning Tape

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

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

2.25. Wire and Cable

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

2.25.1. Loop Wire

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

2.25.2. Cable No. 14/1 Pair

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

2.25.3. Grounding conductor

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

2.25.4. Service Entrance Conductor

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

2.25.5. Telephone Wire

Telephone wire shall be Category 3 (Cat 3) or Category 5 (Cat 5) and shall be equipped with an RJ-11 modular plug.

2.25.6. Terminal for electrical wire or cable

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

2.26. Wood Post

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

2.27. Wooden Pole

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

3. CONSTRUCTION METHODS

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

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

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

Unless otherwise specified, installed materials shall be new.

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

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

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

3.1. Anchoring

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

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

3.2. Bore and Jack Pipe – 2"

Furnish: Steel Encasement Pipe, 2"

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

3.3. Cleanup and Restoration

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

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

3.4. Conduit

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

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

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

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

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

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

3.5. Electrical Service

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

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

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

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

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

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

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

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

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

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

3.6. Flashing Arrow

Furnish: Arrow Panel

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

3.7. Galvanized Steel Cabinet

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

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

cabinet faces the roadway.

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

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

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

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

3.8. Grounding

Furnish: Ground rod with clamp; grounding conductor.

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

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

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

3.9. Install Pad Mount Enclosure

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

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

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

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

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

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

Install two ¾ inch rigid steel conduits: one for electrical service and one for telephone service from the base of the enclosure to 24 inches beyond the concrete base. Make all field wiring connections to the electrical service and/or telephone service, as applicable.

If electrical and/or telephone service are not provided as bid items in the contract, plug conduit on both ends with a cap, conduit sealant, or electrical tape. Mark the location of the buried conduit end(s) with a wooden stake labeled "3/4 in. conduit."

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

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

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

3.10. Install Controller Cabinet

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

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

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

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

Install one ¾ inch rigid steel conduit with two lb condulets from cabinet to electrical service disconnect box. Install one ¾ inch rigid steel conduit with two LB condulets from cabinet to telephone network interface device box. Make all field wiring connections to the electrical service and/or telephone service, as applicable.

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

Install specified rigid steel conduit(s) and type LB condulet(s) into the bottom of the cabinet for sensor wire entry. The limit of conduits incidental to "Install Controller Cabinet" is 24 inches beyond the face of the pole.

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

3.11. Junction Box Type 10x8x4

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

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

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

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

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

3.12. Junction Box Type A, B, or C

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

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

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

3.13. Loops

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

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

Upon completion of this meeting, the Contractor shall measure out and mark the

proposed loop locations with spray paint or chalk such that the saw slots will be parallel and perpendicular to the direction of traffic. Marked lines shall be straight and exact to the locations determined and sized as shown on the plans. Unless indicated otherwise, loops shall be 6 feet by 6 feet square and loops in the same lane shall be spaced 16 feet from leading edge to leading edge.

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

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

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

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

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

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

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

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

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

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

3.14. Maintain and Control Traffic

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

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

3.15. Open Cut Roadway

Furnish: Concrete, reinforcing bars.

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

3.16. Piezoelectric Sensor

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

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

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

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

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and properly positioned in the lane.
- It is strongly recommended that a ¾ inch wide diamond blade be used for cutting the slot, or that blades be ganged together to provide a single ¾ inch wide cut. The slot shall be wet cut to minimize damage to the pavement.
- Cut a slot ¾ inch wide (±1/16 inch) by 1 inch minimum deep. The slot should be a minimum of 2 inches longer than the sensor (including the lead attachment). Drop the saw blade an extra ½ inch down on both ends of the sensor. The lead out of the passive cable should be centered on the slot.
- Cut the slot for the passive cable ¼ inch wide and at a depth so that the top of the backer rod is a minimum of 2 inches below the road surface.
- Clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot using a high pressure washer.
- Completely dry the slot and within 1 foot on all sides of the slot using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.

- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Place strips of 2-4 inch wide tape strips on the pavement along the lengths of both sides of the sensor slot, 1/8 inch away from the slot.
- Wear clean, protective latex (or equivalent) gloves at all times when handling sensors. Visually inspect sensor to ensure it is straight. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify that the correct sensor type and length is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet. Piezo lead-in cable shall not be spliced.
- Test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within ±20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results and label "pre-installation." This information should be stored in the counter cabinet and/or returned to Department Planning personnel.
- Lay the sensor next to the slot and ensure that it is straight and flat.
- Clean the sensor with steel wool or an emery pad and wipe with alcohol and a clean, lint-free cloth.
- Place the installation bracket clips every 6 inches along the length of the sensor.
- Bend the tip of the sensor downward at a 30° angle. Bend the lead attachment end down at a 15° angle and then 15° back up until level (forming a lazy Z).
- Place the sensor in the slot, with the brass element 3/8 inch below the road surface along the entire length. The tip of the sensor should be a minimum of 2 inches from the end of the slot and should not touch the bottom of the slot. The top of the plastic installation bracket clips should be 1/8 inch below the surface of the road. The lead attachment should not touch the bottom or sides of the slot. Ensure the sensor ends are pushed down per the manufacturer's instructions.
- Visually inspect the length of the sensor to ensure it is at uniform depth along its length and it is level (not twisted, canted or bent).
- On the passive cable end, block the end of the slot approximately 3-5 inches beyond the end of the lead attachment area creating an adequate "dam" so that the sensor grout does not flow out.
- Use one bucket of sensor grout per piezo installation. Overfill the slot with sensor grout and allow to cure for a minimum of 10 minutes before continuing with the installation. Ensure that sensor grout fills around and beneath the sensor completely and that there is not a trough on top.
- Remove the tape along the sides of the saw slot when the adhesive starts to cure.
- Carefully remove the dam from the end of the sensor.
- Route the lead-in cable through the saw slot
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Cover the lead-in cable with encapsulant, backer rod, and grout.
- If necessary, after the grout has hardened, grind with an angle grinder until the profile is a 1/16 inch mound. There shall be no concave portion to the mound.

- Clean up the site and dispose of all waste off the project.
- Ensure that the sensor grout has completely cured prior to subjecting the sensor to traffic. Curing time will vary with temperature and humidity.

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

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

3.17. Pole – Wooden

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

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

3.18. Removal of Existing Equipment

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

3.19. Signs

Furnish: Signs; sign standards; hardware.

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

3.20. Splicing

Furnish: Splice kit; solder.

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

All splices shall conform to the provisions of the NEC.

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

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

3.21. Telephone Service

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

The Contractor shall contact the local telephone company for the installation of telephone service to the site. Telephone Company will install service to a telephone network interface device (NID) on the pole.

Install rigid ¾ inch conduit with weatherhead from the cabinet to 72 inches above the finished grade and install conduit straps every 30 inches on center. Install telephone cable with and RJ-11 modular plug from NID to cabinet. Leave eight feet of additional telephone cable coiled inside cabinet.

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

3.22. Trenching and Backfilling

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

Excavate trench and provide required cover as shown on the standard detail sheets. After placing conduit, backfill material shall be placed and compacted in lifts of 9 inches or less. Install warning tape as shown on the detail sheet. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required).

3.23. Wiring

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

Installation of all wiring shall conform to the NEC. Permanent identification numbers shall be affixed to all wires in all junction boxes and cabinets (see Layout(s) for loop and piezo numbers).

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

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

3.24. Wood Post

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

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

4. BID ITEM NOTES AND METHOD OF MEASUREMENT FOR PAYMENT

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

4.1. Bore and Jack Pipe – 2”

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

4.2. Conduit

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

4.3. Electrical Service

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

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

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

Electrical service will be measured in individual units each.

4.4. Flashing Arrow

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

4.5. Galvanized Steel Cabinet

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

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

4.6. Install Pad Mount Enclosure

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

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

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

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

4.7. **Install Controller Cabinet**

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

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

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

Install Controller Cabinet will be measured in individual units each.

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

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

4.9. Junction Box Type A, B, or C

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

the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing a grounding conductor bonding all conduit grounding bushings in the box. Junction Box Type A, B, or C will be measured in individual units each.

4.10. Loop Saw Slot and Fill

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

4.11. Maintain and Control Traffic

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

4.12. Open Cut Roadway

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

4.13. Piezoelectric Sensor

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

4.14. Pole – 35’ Wooden

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

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

4.15. Signs

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

4.16. Telephone Service

Telephone Services shall include furnishing and installing all necessary materials and payment of all fees toward the complete installation of a telephone service, which has passed all required inspections. Incidental to this item shall be furnishing and installing:

- Telephone cable with an RJ-11 modular plug
- Rigid steel conduit
- Rigid steel conduit fittings
- Conduit straps
- Weatherhead

Telephone service will be measured in individual units each.

4.17. Trenching and Backfilling

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

4.18. Wire or Cable

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

4.19. Wood Post

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

SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

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

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

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

II. MATERIALS.

A. Latex Concrete. See Section 606.03.17.

B. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

C. Bituminous Asphalt. See Paving Summary.

D. Epoxy-Sand Slurry. See Section 606.03.10.

III. CONSTRUCTION.

A. Remove Existing Overlay. In addition to Section 606.03.03, totally remove the existing concrete overlay by milling. See Special Note for Use of Hydrodemolition Method. Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.

B. Partial Depth Slab Repair and Latex Overlay. Remove areas determined to be unsound by the Engineer via hydrodemolition or via hand held jackhammers weighing less than 45lbs in accordance with Section 606.02.10 D. Repair/Replace all damaged or severely corroded reinforcing bars prior to partial depth repair operation. The Department will not measure material removal and will consider this work incidental to the bid item "PARTIAL DEPTH PATCHING". Mix and place Latex Modified Concrete Overlay in accordance with Sections 606.03.08 and 606.03.17.

C. Asphalt Approach Pavement. Mill each existing asphalt approach as shown on the roadway plan sheets. The grinding depth may vary depending of the condition of the existing approach and final elevation of bridge end. Dispose of all removed material away from the site.

D. Surface Texturing. Texture the concrete surface of the overlay in accordance with Section 609.03.10.

IV. MEASUREMENT. See Section 606 and the following:

A. Latex Modified Concrete for Overlay. The Department will measure the quantity in cubic yards using the theoretical volume as follows for each bridge:

width x length x 1.50" (units in cubic yards)

B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will measure the quantity in cubic yards by deducting the theoretical volume of bridge deck overlay (LMC) from the total volume (as indicated by the batch quantity tickets) of Concrete required to obtain the finished grade shown on the Plans or established by the Engineer.

C. Remove Existing Overlay. The Department will measure the removal of the existing overlay in square yards, which shall include all labor, equipment, and material needed to complete this work.

D. Steel Reinforcement. The Department will measure any reinforcing steel necessary for the partial or full depth patch in pounds, which shall include all labor, equipment, and material needed to complete this work.

E. Asphalt Approach Pavement. The Department will measure the quantity in square yards, which shall include all labor, equipment, and material needed to complete this work.

V. PAYMENT. See Section 606 and the following:

A. Latex Modified Concrete for Overlay. The Department will make payment for the Latex Modified Concrete under bid item #08534 "CONCRETE OVERLAY – LATEX" for the theoretical quantity.

B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will make payment for the Partial Depth Patching under bid item #24094EC "PARTIAL DEPTH PATCHING". Payment will be for the quantity per cubic yard complete in place.

C. Remove Existing Overlay. The Department will make payment for the removal of the existing overlay under the bid item #08510 "REM EPOXY BIT FOREIGN OVERLAY". Payment will be for the square yard complete.

D. Steel Reinforcement. The Department will make payment for steel reinforcement, if necessary, under bid item #08150 "STEEL REINFORCEMENT". Payment will be at the unit price per pound.

E. Asphalt Approach Pavement. See Paving Summary**.**

SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

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

Description

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

Equipment

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

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

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

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

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

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

Construction Methods

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

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

Preparation of Existing Deck

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

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

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

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

Removal of Existing Asphaltic Concrete Overlays

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

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

Removal of Existing Modified Concrete Overlays

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

Existing overlay material which is sound and bonded may be left in patch areas with approval of the Project Engineer. If determined the existing patches are to be removed, jackhammers, not to be heavier than the nominal35lb class shall be used to remove debonded areas.

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

Bridge Decks with No Existing Concrete Overlay

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

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

Concrete Removal by Hydro-Demolition

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

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

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

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

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

The Engineer shall verify the following settings:

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

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

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

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

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

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

Cleaning

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

Resounding

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

Full Depth Repair

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

Preparation Prior to Overlay Placement

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

Method of Measurement

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

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

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

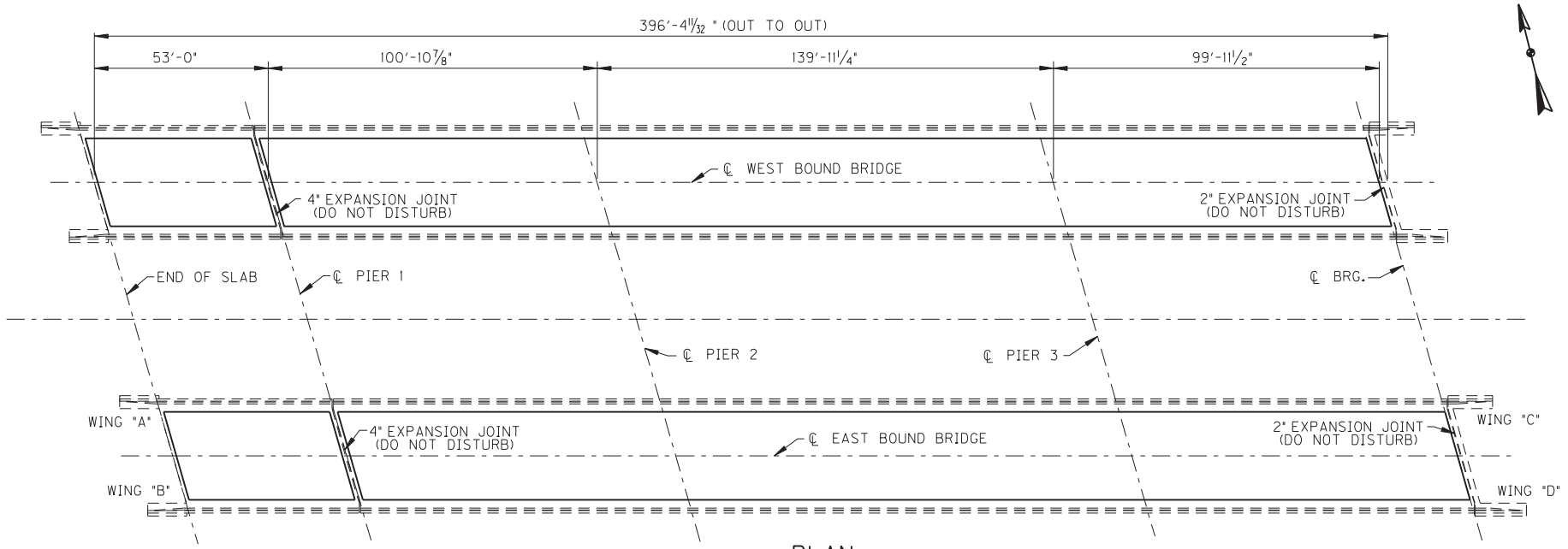
Full Depth Repair when encountered on a bridge deck and marked in the field by the Engineer, full depth repair shall be paid for per Cubic Yard of Class M Concrete used.

Basis of Payment

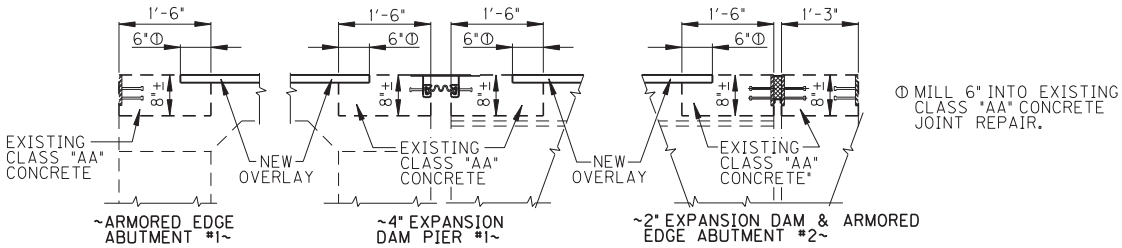
Payment for completed and accepted quantities as measured above will be made at the contract price for one of the following:

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

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



PLAN



DETAIL AT EXPANSION JOINTS

ESTIMATE OF QUANTITIES

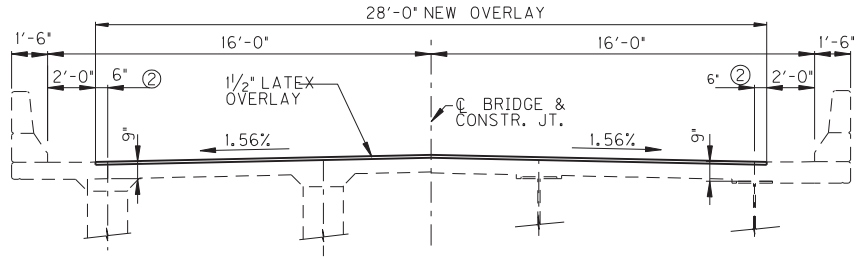
BID ITEM CODE	24094EC		08510	08526	08534	08549	
BID ITEM	Partial Depth Patching		Rem. Epoxy Bit. Forign Overlay	Conc. Class "M" Full Depth Patch	Concrete Overlay-Latex	Blast Cleaning	
BRIDGE	C.Y.		SY.	C.Y.	C.Y.	S.Y.	
I-64 OVER SLATE CR.(MP 120.0)	22.0		2431	12.0	101.3	2467	
ROADWAY PLAN TOTALS	22.0		2431	12.0	101.3	2467	

NOTE : QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY

SPECIAL NOTES:

BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

USE OF HYDRODEMOLITION METHOD



TYPICAL SECTION

② MILL 6" INTO EXISTING CLASS "AA" CONCRETE CANTILEVER SLAB REPLACEMENT.

REVISION	DATE

DATE: JULY, 2012	CHECKED BY
DESIGNED BY:	
DETAILED BY:	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: BATH

ROUTE: I-64 | CROSSING: SLATE CK. & KENDALL SPRINGS RD.

MP 120.0

ITEM NUMBER: 9-2023.0

PREPARED BY: HMB PROFESSIONAL ENGINEERS, INC.

SHEET NO.:

DRAWING NO.:

(L-016-2012)

M E M O R A N D U M

cc: D. Eldridge
A. Ross
J. Simpson
B. Bryant
R. Stull
C. Young (HMB)

TO: **Dan Hite, PE**
Project Manager Coordinator
Division of Highway Design

FROM: **Bart Asher, PE**
Geotechnical Branch Manager
Division of Structural Design

BY: **Danny Molen**
Geotechnical Branch

DATE: **September 27, 2012**

SUBJECT: **Bath County**
I-64 Milepoint 123.63
Pavement Rehab Slide Area
Item # 9-2023.0
Geotechnical Engineering Landslide Report

The Geotechnical Branch has completed the investigation of the subject landslide area. The landslide is located on the north side of westbound I-64 in Bath County at approximate milepoint 123.63. Stations for this project are not known at this time; therefore, the construction limits are referenced to milepoint numbers. The surveying was performed by HMB Engineers. The drilling was performed by the Geotechnical Branch.

The Geotechnical Branch recommends excavate and replace for the correction of this area. The embankment slope shall be excavated on a 1:1 slope with a minimum 10 foot shear key placed on unweathered bedrock. The full depth construction is from milepoint 123.623 to milepoint 123.646. The coordinates for these milepoints located on the shoulder are Latitude 38.144107, Longitude -83.712851 and Latitude 38.144271, Longitude -83.712476, respectively.

The replacement material shall be granular consisting of Kentucky Coarse Aggregate #2's, 3's or 23's constructed on a 2H:1V slope. A geotextile fabric shall be used as a separator between the soil and granular material.

Construction of the shear key may require removing and replacing a portion of the 30 inch drain pipe.

Geotechnical Recommendations . . .

1). Excavate perpendicular to centerline from the edge of the shoulder on a 1:1 slope and replace as shown on the plans. Taper parallel to centerline on a 1:1 slope then to full depth construction 10 feet before milepoint 123.623 and end 10 feet past milepoint 123.646 then tapering out on a 1:1 slope.

2). Do not stockpile, even temporarily, material on top of the embankment.

3). Place a Geotextile Fabric Type IV between the soil and rock meeting the requirements of Section 843 of the Standard Specifications for Road and Bridge Construction, current edition. Install the Geotextile Fabric in accordance with Section 214 of the Standard Specifications for Road and Bridge Construction, current edition. Take special care not to rip or tear the fabric.

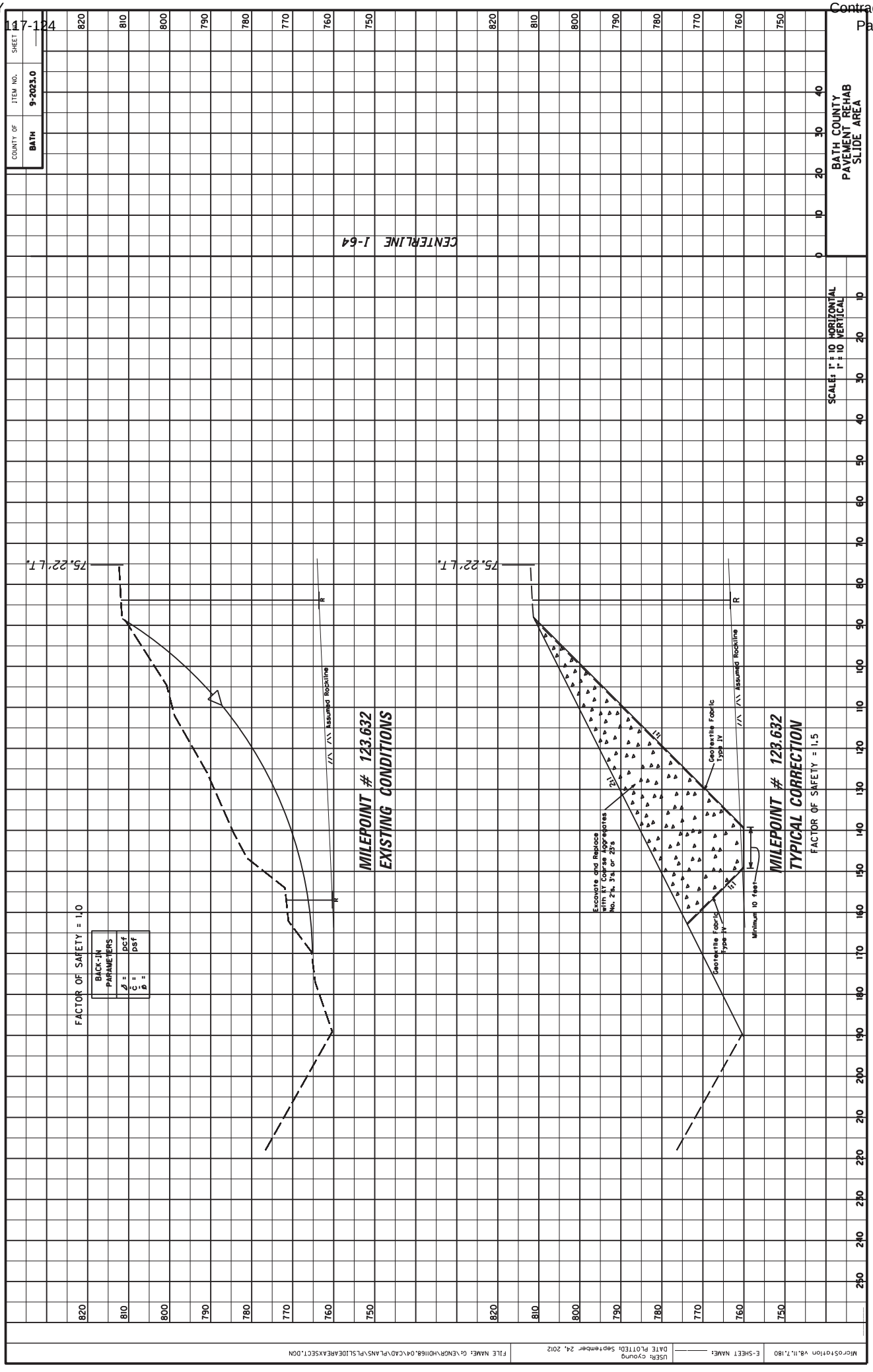
4). The refill shall be reconstructed on a 2H:1V slope with Kentucky Coarse Aggregate # 2's, 3's or 23's in accordance with Section 805 of the current Standard Specifications for Road and Bridge Construction.

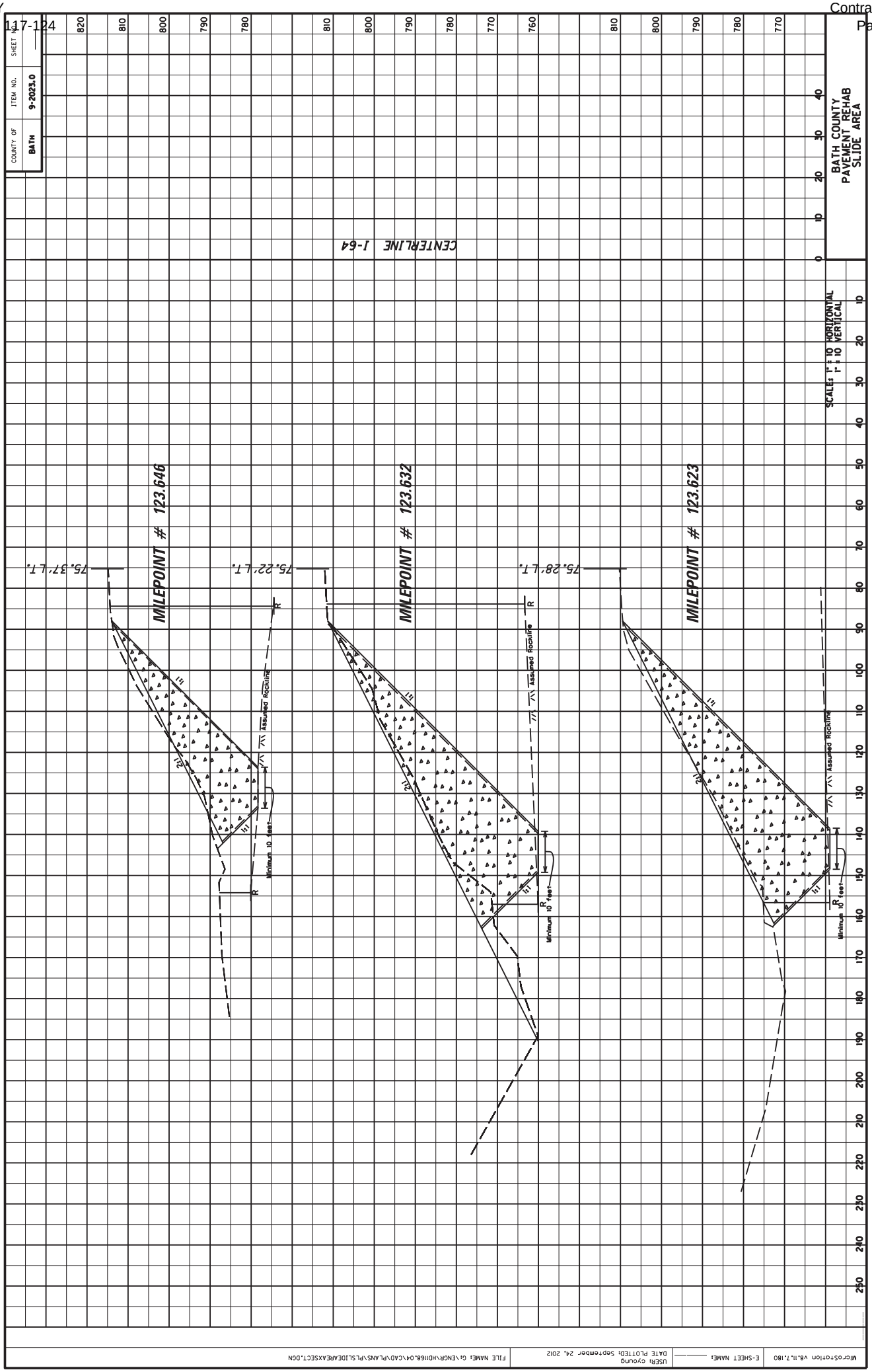
5). A french drain shall be placed perpendicular to centerline at the base of the granular material and extended to the toe of the slope in order to maintain positive drainage of the shear key. The french drain shall be 3 feet by 3 feet and constructed with Kentucky Coarse Aggregate # 2's, 3's or 23's in accordance with Section 805 of the current Standard Specifications for Road and Bridge Construction. The granular material shall be wrapped with a Geotextile Fabric Type IV meeting the requirements of Section 843 of the Standard Specifications for Road and Bridge Construction, current edition.

6). Excavation will involve some risk. Perform excavation in short increments (50 feet length or less). Excavated areas must be refilled to grade within 48 hours.

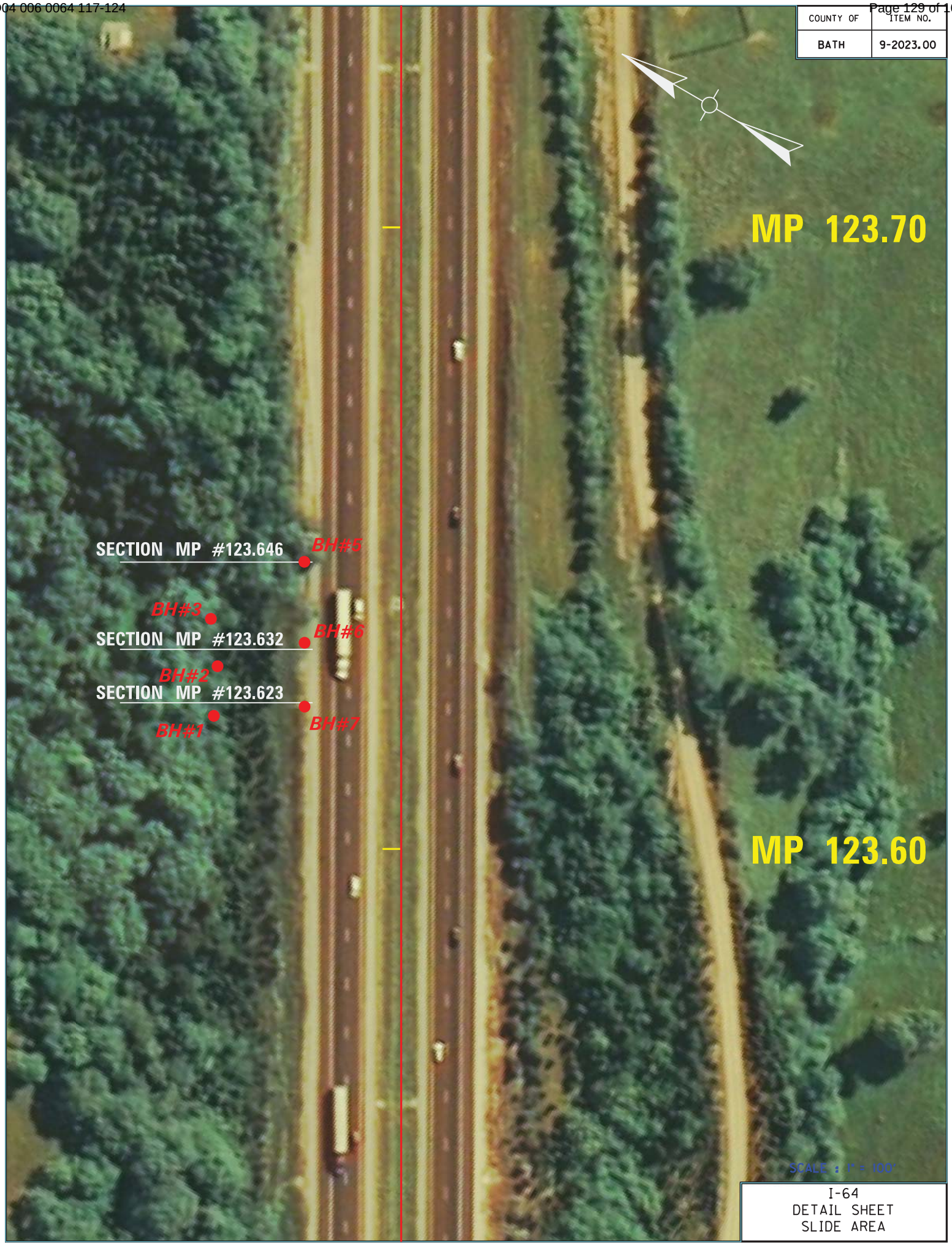
Attached are the stability analyses and the cross sections, showing the proposed landslide correction. The CADD input for these sheets is being e-mailed to the HMB Engineers. If you have any questions feel free to contact the Geotechnical Branch at (502) 564-2374.

Attachments:

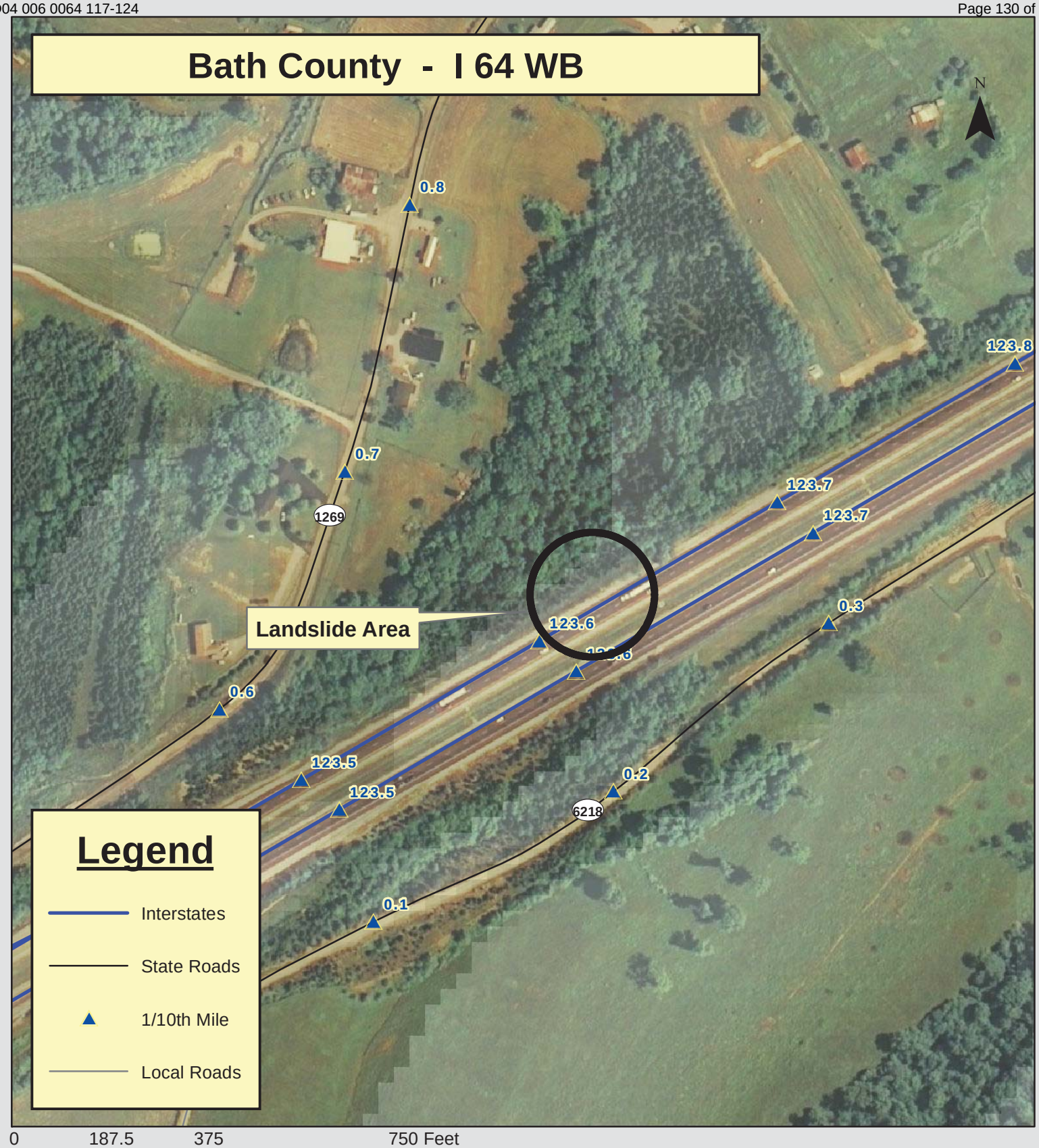

COUNTY OF BATH
ITEM NO. 9-2023.0
SHEET
BATH COUNTY
PAVEMENT REHAB
SLIDE AREA
SCALE: 1" = 10 HORIZONTAL
1" = 10 VERTICAL
CENTERLINE I-64
75.22' L.T.
R
Assumed Rockline
MILEPOINT # 123.632
EXISTING CONDITIONS
FACTOR OF SAFETY = 1.0
BACK-IN PARAMETERS
Ø = pcf
C = psf
Ø =
75.22' L.T.
R
Assumed Rockline
Excavate and Replace with #1 Coarse Aggregates No. 2's, 3's, or 23's
Geotextile Fabric Type IV
Geotextile Fabric Type IV
Minimum 10 feet
2:1
1:1
1:1
MILEPOINT # 123.632
TYPICAL CORRECTION
FACTOR OF SAFETY = 1.5
MicroStation V8.11.7.180
E-SHEET NAME:
USER: cyoung
DATE PLOTTED: September 24, 2012
FILE NAME: G:\ENGR\HDII68.04\CAD\PLANS\PLSLIDEAREASECT.DGN


COUNTY OF BATH
ITEM NO. 9-2023.0
SHEET NO. ——
BATH COUNTY
PAVEMENT REHAB
SLIDE AREA
SCALES: 1" = 10 HORIZONTAL
1" = 10 VERTICAL
CENTERLINE I-64
MILEPOINT # 123.646
MILEPOINT # 123.632
MILEPOINT # 123.623
75.37' L.T.
75.22' L.T.
75.28' L.T.
Assumed Rockline
Minimum 10 feet
1:1
1:2
R
MicroStation V8.11.7.180
E-SHEET NAME: ——
USER: cyoung
DATE PLOTTED: September 24, 2012
FILE NAME: G:\ENGR\HDH168.04\CAD\PLANS\PLSLIDEAREASECT.DGN

COUNTY OF	ITEM NO.
BATH	9-2023.00



I-64
DETAIL SHEET
SLIDE AREA



Kentucky UNBRIDLED SPIRIT™

Bath County
I-64 WB

Landslide at MP 123.63

COORDINATE DATA SUBMISSION FORM
KYTC DIVISION OF STRUCTURAL DESIGN -- GEOTECHNICAL BRANCH

County BATH **Date** 9/27/2012

Road Number I-64

Survey Crew / Consultant HMB Engineers

Contact Person Clint Young

Item # 9-2023.0

Mars #

Project #

Notes:

Elevation Datum = NAVD88 or ASSUMED

HOLE NUMBER	LATITUDE (Decimal Degrees)	LONGITUDE (Decimal Degrees)	HOLE NUMBER	STATION	OFFSET	ELEVATION (ft)
1	38.144282	-83.713004	1			775.40
2	38.14433	-83.71287	2			771.55
3	38.144397	-83.712757	3			774.13
5	38.144271	-83.712476	5			814.50
6	38.144179	-83.712685	6			811.95
7	38.144107	-83.712851	7			809.79

General Note 444
Asphalt Pavement Ride Quality
Item 9-2023.00: I-64 Pavement Rehabilitation – Bath Co.

Pavement Rideability Requirements, in accordance with Section 410 of the Standard Specifications, Current Edition, shall apply on this project. Category A shall apply.

General Note 447
Compaction of Asphalt Mixtures
Item 9-2023.00: I-64 Pavement Rehabilitation – Bath Co.

Will accept the compaction of asphalt mixtures furnished for the driving lanes and ramps at one inch or greater on this project by option A according to subsections 402 and 403 of the Standard Specifications, Current Edition. Use joint cores as described in subsection 402.03.02 for surface mixtures only. Will accept the compaction of all other asphalt mixtures by option B.

INTERSTATE 64 REHABILITATION – BATH COUNTY
HIGHWAY DISTRICT 9 (ITEM # 9-2023)
PUBLIC INFORMATION PLAN

The primary goal of the Public Information Plan (PIP) is to inform the motoring public and area stakeholders of project information including Maintenance of Traffic (MOT) plans as well as road, lane or ramp closures. The KYTC District 9 Public Information Officer (PIO) will assist Project Development, Delivery and Construction staff disseminate this information and other materials to stakeholders and the media.

LOCAL STAKEHOLDERS

- Elected Officials
  - Owingsville Mayor Don Kincaid – (606) 674-6361, Owingsville@alltel.net
  - Bath County Judge-Executive Carolyn Belcher – (606) 675-6346
  - Sheriff John Snedegar, (606) 674-2931
  - State Rep. Sannie Overly – (502) 564-8100, Sannie.Overly@lrc.ky.gov
  - State Sen. R.J. Palmer – (502) 564-8100, RJ.Palmer@lrc.ky.gov

- Local Agencies
  - Bath County EMS: (606) 674-8158
  - Rowan County EMS: (606) 784-4333, rowancoems@yahoo.com
  - Owingsville Police: Chief Mike Martin, (606) 674-6361
  - KSP Morehead, Post 8, PAO Endre Samu – (606) 784-4127, Endre.Samu@ky.gov
  - Owingsville Fire Department: Chief Darrel King (606) 674-6361
  - Bath County Schools: (606) 674-6314; Transportation Director Burnsy Stewart, burnsy.stewart@bath.kyschools.us
  - Morehead State University – President Dr. Wayne Andrews, (606) 783-2022; Jason Blanton, communications, jblanton@moreheadstate.edu
  - St. Joseph Mount Sterling (hospital) – (859) 497-5000
  - St. Claire Regional Medical Center, Morehead – (606) 783-6500, publicrelations@st-claire.org

- Utility Companies
  - Local utility companies – other than city utilities, which may be contacted via government information above – are kept apprised by project engineers and at any project meetings.

- Industry/Other
  - Daniel Boone National Forest, Cumberland Ranger District, Morehead Ky., District Ranger James Manner: (606) 784-6428
  - US Army Corps of Engineers Cave Run Lake, (606) 784-9709

- Chamber of Commerce (for local business and local travel notices), Contact: (606) 674-8830, info@bathchamber.com or on Facebook at http://www.facebook.com/bathchamber

TRUCKING FIRMS AND OUT-OF-STATE STAKEHOLDERS

Information will be distributed electronically to trucking firms via the Department of Vehicle Regulation (502-564-4540). Information will also be posted on the 511 web site (www.511.ky.gov), the 511 telephone information system, other electronic traffic alert systems in the district, as well as appropriate web-based social media resources. If necessary, the PIO will assist Transportation Operations Center in sending text alerts through various commercial trucking agency systems.

PRESENTATIONS

A project description including anticipated schedule will be provided to the media, stakeholders, emergency service agencies and tourist destinations (national forest and lake, see below) prior to and during construction. Information will be provided to these groups via traffic advisories, press releases, and District 9/KYTC web sites. Direct information to local trip generators and/or road users – such as flyers, maps and other materials – will be provided if necessary. Variable message boards may be placed at key locations prior to project site to warn incoming motorists. Signed detours may also be provided, if warranted.

MEDIA RELATIONS

The District PIO will initiate a media campaign involving local newspapers, radio, television, and local travel/recreation agencies if applicable. The PIO will prepare an initial news release regarding the contract award for the project, and a subsequent release at start of construction. The PIO will conduct media interviews as requested throughout the project duration to keep the public informed of construction progress. Traffic advisories will be submitted to the media when a change in the MOT occurs. Considering the project is in an area with little or no daily media, the contractor must provide to the PIO via project engineers notification of any change in the MOT at least seven (7) days prior to the change.

- PIO Contact Information
  - Allen Blair – (606) 845-2551, (606) 748-3716 (cell); email allen.blair@ky.gov

PIP INFORMATION

The following information has been gathered for use in the Public Involvement Plan and/or for use in traffic management planning regarding this project:

A: Trip Generators – Destinations relying on the project corridor include the cities of Morehead, Olive Hill, Owingsville and Mount Sterling; as well as the Daniel Boone National Forest, Cave Run Lake, Morehead State University, St. Claire Regional Medical Center and Rowan County Schools (daily bus route), and major connecting highways such as KY 32, KY 36, US 60, I-64, etc.

B: Road Users – Traffic utilizing the project corridor include residents, health care providers/recipients, university students, work and recreation commuters, long-haul truckers, local and regional commercial companies. In addition, this section of I-64 serves many campers, boaters and recreational site users traveling to the Daniel Boone National Forest and Cave Run Lake.

C: Media market – This area is in the Central Kentucky media market, which has a small offering of newspaper, radio and television, including but not limited to:

- The Morehead News
- Bath County News-Outlook
- Mount Sterling Advocate
- West Liberty Courier/Elliott County News
- WIVY Radio/Gateway Radio News – Mount Sterling
- Morehead Public Radio
- Lexington Herald-Leader
- Clearchannel Communications
- WLEX Lexington
- WKYT Lexington
- WTVQ Lexington
- WGOH Go Radio Grayson

D: Public information message – Project is an important rehabilitation of an interstate corridor that serves regional travelers, local commuters, tourists, university, school and hospital visitors. Rehabilitation will provide improved travel conditions and increased highway safety, and includes pavement enhancements and improved longevity for state transportation network.

To accomplish the work with least amount of disruption and most cost efficiency, lane closures and other minimal traffic disruptions are necessary.

Primary communications will involve three basic traffic messages – effects on local and regional travel, delays, and possible alternate routes – for the duration of the project.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

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

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

Right-of-Way Certification Form

Revised 2/22/11

☑ Federal Funded ☑ Original
☐ State Funded ☐ Re-Certification

This form must be completed and submitted to FHWA with the PS&E package for federal-aid funded Interstate, Appalachia, and Major projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under Conditions No. 2 or 3 outlined elsewhere in this form. When Condition No. 2 or 3 apply, KYTC shall resubmit this ROW Certification prior to construction contract Award. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: September 25, 2012

Project Name: I-64
Letting Date:
Project #: MP 117.83 - MP 123.6
County: Bath
Item #: 09-2023.00
Federal #:

Description of Project: Mill & thin asphalt overlay on I-64

Projects that require NO new or additional right-of-way acquisitions and/or relocations

☑ The proposed transportation improvement will be built within the existing rights-of -way and there are no properties to be acquired, individuals, families, and businesses ("relocatees") to be relocated, or improvements to be removed as a part of this project.

Projects that require new or additional right-of-way acquisitions and/or relocations

☐ Per 23 CFR 635.309, the KYTC hereby certify that all relocatees have been relocated to decent, safe, and sanitary housing or that KYTC has made available to relocatees adequate replacement housing in accordance with the provisions of the current FHWA directive(s) covering the administration of the Highway Relocation Assistance Program and that at least one of the following three conditions has been met. (Check those that apply.)

☐ **Condition 1.** All necessary rights-of-way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Fair market value has been paid or deposited with the court.

☐ **Condition 2.** Although all necessary rights-of-way have not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Trial or appeal of some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Fair market value has been paid or deposited with the court for most parcels. Fair market value for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract. (See note 1 below.)

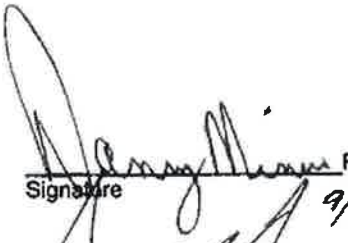
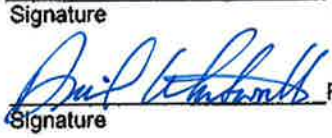
Note 1: The KYTC shall re-submit a right-of-way certification form for this project prior to AWARD of all Federal-Aid construction contracts. Award must not to be made until after KYTC has obtained full legal possession and fair market value for all parcels has been paid or deposited with the court and FHWA has concurred in the re-submitted right-of-way certification.

Right-of-Way Certification Form

Revised 2/22/11

☐ **Condition 3.** The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA concurrence. (See note 2.)

Note 2: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to bid letting shall be the exception and never become the rule. In all cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocatees prior to AWARD of all Federal-Aid construction contracts or force account construction.

Approved:	Danny Mineer Printed Name	 Signature	Right-of-Way Supervisor 9/25/12
Approved:	DAVID L. ORR Printed Name	 Signature	KYTC, Director of ROW &Utilities
Approved:	David Whitworth Printed Name	 Signature	9/26/12 FHWA, ROW Officer (when applicable)

Right-of-Way Certification Form

Revised 2/22/11

Date: September 25, 2012

Project Name: I-64
Project #: MP 117.83 - MP 123.6
Item #: 09-2023.00
Letting Date: _____
County: Bath
Federal #: _____

This project has 0 total number of parcels to be acquired, and 0 total number of individuals or families to be relocated, as well as 0 total number of businesses to be relocated.

_____ Parcels where acquired by a signed fee simple deed and fair market value has been paid

_____ Parcels have been acquired by IOJ through condemnation and fair market value has been deposited with the court

_____ Parcels have not been acquired at this time *(explain below for each parcel)*

_____ Parcels have been acquired or have a "right of entry" but fair market value has not been paid or has not been deposited with the court *(explain below for each parcel)*

_____ Relocatees have not been relocated from parcels ____, ____, ____, ____, ____, ____, and ____ *(explain below for each parcel)*

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation

There are 0 billboards and/or 0 cemeteries involved on this project.

There are 0 water or monitoring wells on parcels ____, ____, ____, ____, and ____. All have been acquired and are the responsibility of the project contractor to close/cap.

Form Effective Date: April 1, 2006
Last Revised: February 22, 2011

UTILITY NOTES TO BE INCLUDED IN THE PROPOSAL
SPECIAL NOTES FOR UTILITY CLEARANCE
IMPACT ON CONSTRUCTION

BATH COUNTY, I-64
MP 117.83 – MP 123.60
ITEM NO. 9-2023.00

There are no utilities involved with this project.

There are no railroads involved with this project.

PROTECTION OF UTILITIES

The location of utilities provided in the contact documents has been furnished by the facility owners and/or by reviewing record drawings and may not be accurate. It will be the roadway contractor's responsibility to locate utilities before excavating by calling the various utility owners and by examining any supplemental information supplied by the cabinet. If necessary, the roadway contractor shall determine the exact location and elevation of utilities by hand digging to expose utilities before excavating in the area of a utility. The cost for repair and any other associated costs for any damage to utilities caused by the roadway contractor's operations shall be borne by the roadway contractor.

BEFORE – U – DIG (BUD)

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

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition

(Effective with the August 17, 2012 Letting)

Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilites.
Number:	4) Density.
Revision:	Replace the second sentence of the Option A paragraph with the following: Perform coring by the end of the following work day.
Subsection:	606.03.17 Special Requirements for Latex Concrete Overlays.
Part:	A) Existing Bridges and New Structures.
Number:	1) Prewetting and Grout-Bond Coat.
Revision:	Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
Subsection:	609.03 Construction.
Revision:	Replace Subsection 609.03.01 with the following: 609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast concrete release the temporary erection supports under the bridge and swing the span free on its supports. 609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam is placed in the final location and prior to placing steel reinforcement. At locations where lift loops are cut, paint the top of the beam with galvanized or epoxy paint.

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 (between forty and seventy); 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 (between forty and seventy). 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, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin 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 (between forty and seventy), 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.

III. PAYMENT OF PREDETERMINED MINIMUM WAGES

1. These special provisions are supplemented elsewhere in the contract by special provisions which set forth certain predetermined minimum wage rates. The contractor shall pay not less than those rates.

2. The minimum wage determination schedule shall be posted by the contractor, in a manner prescribed by the Department of Highways, at the site of the work in prominent places where it can be easily seen by the workers.

IV. STATEMENTS AND PAYROLLS

1. All contractors and subcontractors affected by the terms of KRS 337.505 to 337.550 shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages. Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of one (1) year from the date of completion of this contract.

2. The payroll records shall contain the name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid.

3. The contractor shall make his daily records available at the project site for inspection by the State Department of Highways contracting office or his authorized representative.

Periodic investigations shall be conducted as required to assure compliance with the labor provisions of the contract. Interrogation of employees and officials of the contractor shall be permitted during working hours.

Aggrieved workers, Highway Managers, Assistant District Engineers, Resident Engineers and Project Engineers shall report all complaints and violations to the Division of Contract Procurement.

The contractor shall be notified in writing of apparent violations. The contractor may correct the reported violations and notify the Department of Highways of the action taken or may request an informal hearing. The request for hearing shall be in writing within ten (10) days after receipt of the notice of the reported violation. The contractor may submit

records and information which will aid in determining the true facts relating to the reported violations.

Any person or organization aggrieved by the action taken or the findings established as a result of an informal hearing by the Division of Contract Procurement may request a formal hearing.

4. The wages of labor shall be paid in legal tender of the United States, except that this condition will be considered satisfied if payment is made by a negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payments, the contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.

5. No fee of any kind shall be asked or accepted by the contractor or any of his agents from any person as a condition of employment on the project.

6. No laborers shall be charged for any tools used in performing their respective duties except for reasonably avoidable loss or damage thereto.

7. Every employee on the work covered by this contract shall be permitted to lodge, board, and trade where and with whom he elects and neither the contractor nor his agents, nor his employees shall directly or indirectly require as a condition of employment that an employee shall lodge, board or trade at a particular place or with a particular person.

8. Every employee on the project covered by this contract shall be an employee of either the prime contractor or an approved subcontractor.

9. No charge shall be made for any transportation furnished by the contractor or his agents to any person employed on the work.

10. No individual shall be employed as a laborer or mechanic on this contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks or other equipment from individuals.

No Covered employee may be employed on the work except in accordance with the classification set forth in the schedule mentioned above; provided, however, that in the event additional classifications are required, application shall be made by the contractor to the Department of Highways and (1) the Department shall request appropriate classifications and rates from the proper agency, or (2) if there is urgent need for additional classification to avoid undue delay in the work, the contractor may employ such workmen at rates deemed comparable to rates established for similar classifications provided he has made written application through the Department of Highways, addressed to the proper agency, for the supplemental rates. The contractor shall retroactively adjust, upon receipt of the supplemental rates schedule, the wages of any employee paid less than the established rate and may adjust the wages of any employee overpaid.

11. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work-week in which he is employed on such work, to work in excess of eight hours in any calendar day or in excess of forty hours in such work-week unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work-week. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. This agreement shall be in writing and shall be executed prior to the employee working in excess of eight (8) hours, but not more than ten (10) hours, in any one (1) calendar day.

12. Payments to the contractor may be suspended or withheld due to failure of the contractor to pay any laborer or mechanic employed or working on the site of the work, all or part of the wages required under the terms of the contract. The Department may suspend or withhold payments only after the contractor has been given written notice of the alleged violation and the contractor has failed to comply with the wage determination of the Department of Highways.

13. Contractors and subcontractors shall comply with the sections of Kentucky Revised Statutes, Chapter 337 relating to contracts for Public Works.

Revised 2-16-95

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 (6) provides:
>
> No present or former public servant shall, within six (6) months of 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 the state in matters in which he was directly involved during 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, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved 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.
>
> KRS 11A.040 (8) states:
>
> A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, 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, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

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.

General Decision Number: KY120125 08/31/2012 KY125

Superseded General Decision Number: KY20100211

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

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

Modification Number	Publication Date
0	01/06/2012
1	01/13/2012
2	01/20/2012
3	04/13/2012
4	05/11/2012
5	05/25/2012
6	06/01/2012
7	06/22/2012
8	06/29/2012
9	07/13/2012
10	07/20/2012
11	08/03/2012
12	08/10/2012
13	08/17/2012
14	08/24/2012
15	08/31/2012

BRIN0004-003 06/01/2011

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

BRKY0001-005 06/01/2011

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.57	10.26

BRKY0007-004 06/01/2011

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 28.29	16.80

BRKY0017-004 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.11	9.97

CARP0064-001 07/01/2012

	Rates	Fringes
CARPENTER	$ 26.40	13.91
Diver	$ 39.98	13.91
PILEDRIVERMAN	$ 26.65	13.91

ELEC0212-008 05/28/2012

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 26.11	15.42

ELEC0212-014 06/27/2011

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician	$ 21.55	8.46

ELEC0317-012 05/30/2012

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
Electricians:		

Cable Splicer	$ 32.68	18.13
Electrician	$ 32.22	20.09

ELEC0369-007 05/30/2012

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 29.32	13.78

---

* ELEC0575-002 05/28/2012

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 30.90	13.44

ENGI0181-018 07/01/2012

	Rates	Fringes
Operating Engineer:		
GROUP 1	$ 27.35	13.40
GROUP 2	$ 24.87	13.40
GROUP 3	$ 25.26	13.40
GROUP 4	$ 24.60	13.40

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

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

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

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

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

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

IRON0044-009 06/01/2012

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 22.50	15.10
Structural	$ 24.80	15.10

IRON0070-006 06/01/2012

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD
BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);
CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);
CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);
OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);
SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER	$ 26.34	18.58

IRON0372-006 06/01/2012

BRACKEN, GALLATIN, GRANT, HARRISON and ROBERTSON
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains,
Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis,Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) COUNTIES

	Rates	Fringes

IRONWORKER, REINFORCING

Beyond 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.59	18.58
Up to & including 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.34	18.58

IRON0769-007 06/01/2012

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN
CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);
FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale);
NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

	Rates	Fringes
IRONWORKER		
ZONE 1	$ 30.52	20.08
ZONE 2	$ 30.92	20.08
ZONE 3	$ 32.52	20.08

ZONE 1 - Up to 10 mi. radius of union hall, Ashland, Ky., 1643 Greenup Avenue
ZONE 2 - 10 to 50 mi. radius of union hall;
ZONE 3 - 50 mi. radius and beyond

LABO0189-003 07/01/2012

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.15	11.41
GROUP 2	$ 21.40	11.41
GROUP 3	$ 21.45	11.41
GROUP 4	$ 22.05	11.41

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson;

Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

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

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

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

---

LABO0189-008 07/01/2012

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.61	10.95
GROUP 2	$ 21.86	10.95
GROUP 3	$ 21.91	10.95
GROUP 4	$ 22.51	10.95

LABORERS CLASSIFICATIONS

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

Wrecking of Concrete Forms; General Cleanup

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

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

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

---

LABO0189-009 07/01/2012

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.96	10.60
GROUP 2	$ 22.21	10.60
GROUP 3	$ 22.26	10.60
GROUP 4	$ 22.86	10.60

LABORERS CLASSIFICATIONS

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

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter;

Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

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

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

---

PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes
PAINTER		
Bridge/Equipment Tender and/or Containment Builder	$ 18.90	5.90
Brush & Roller	$ 21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 22.30	5.90
Sandblasting & Waterblasting	$ 22.05	5.90
Spray	$ 21.80	5.90

PAIN0012-017 05/01/2012

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.49	8.33
Brush & Roller	$ 23.10	8.33
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 24.10	8.33
Sandblasting & Water Blasting	$ 23.85	8.33
Spray	$ 23.60	8.33

PAIN0118-004 05/01/2010

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller	$ 18.50	10.30
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 19.50	10.30

PAIN1072-003 12/01/2011

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations	$ 29.33	14.20
Power Generating Facilities	$ 26.09	14.20

PLUM0248-003 06/01/2012

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter	$ 33.00	16.93

PLUM0392-007 06/01/2012

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 29.30	16.59

PLUM0502-003 08/01/2011

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER	$ 31.00	16.13

SUKY2010-160 10/08/2001

	Rates	Fringes

Truck drivers:

GROUP 1	$ 16.57	7.34
GROUP 2	$ 16.68	7.34
GROUP 3	$ 16.86	7.34
GROUP 4	$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

---

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

==========

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

Wage and Hour Administrator
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

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

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

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

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

==========

END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

These rates are listed pursuant to the Kentucky Determination No. CR-III-III- HWY dated September 5, 2012.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

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

Ryan Griffith, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

PART IV

INSURANCE

INSURANCE

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

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

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

PART V

BID ITEMS

PROPOSAL BID ITEMS

Report Date 10/11/12

SECTION: 1 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
0010	00001		DGA BASE	3,822.00	TON		
0020	00071		CRUSHED AGGREGATE SIZE NO 57	53.00	TON		
0030	00078		CRUSHED AGGREGATE SIZE NO 2	11,615.00	TON		
0040	00100		ASPHALT SEAL AGGREGATE	743.00	TON		
0050	00103		ASPHALT SEAL COAT	210.00	TON		
0060	00217		CL4 ASPH BASE 1.00D PG64-22	424.00	TON		
0070	00342		CL4 ASPH SURF 0.38A PG76-22	28,015.00	TON		
0080	01028		PERF PIPE HEADWALL TY 3-4 IN	5.00	EACH		
0090	01490		DROP BOX INLET TYPE 1	1.00	EACH		
0100	01691		FLUME INLET TYPE 2	6.00	EACH		
0110	01825		ISLAND CURB AND GUTTER	10.00	LF		
0120	01877		SPECIAL HEADER CURB	3,150.00	LF		
0130	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	400.00	EACH		
0140	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	50.00	EACH		
0150	01984		DELINEATOR FOR BARRIER - WHITE	40.00	EACH		
0160	02003		RELOCATE TEMP CONC BARRIER	1,400.00	LF		
0170	02165		REMOVE PAVED DITCH	236.00	SQYD		
0180	02200		ROADWAY EXCAVATION	3,936.00	CUYD		
0190	02268		REMOVE & REPLACE FENCE	65,700.00	LF		
0200	02347		WATER GATE TYPE 1	3.00	EACH		
0210	02352		GUARDRAIL-STEEL W BEAM-D FACE	237.50	LF		
0220	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		
0230	02365		CRASH CUSHION TYPE IX-A	2.00	EACH		
0240	02369		GUARDRAIL END TREATMENT TYPE 2A	4.00	EACH		
0250	02381		REMOVE GUARDRAIL	4,805.00	LF		
0260	02391		GUARDRAIL END TREATMENT TYPE 4A	6.00	EACH		
0270	02483		CHANNEL LINING CLASS II	3,452.00	TON		
0280	02484		CHANNEL LINING CLASS III	900.00	TON		
0290	02562		SIGNS	744.00	SQFT		
0300	02575		DITCHING AND SHOULDERING	30,730.00	LF		
0310	02599		FABRIC-GEOTEXTILE TYPE IV	1,346.00	SQYD		
0320	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		
0330	02671		PORTABLE CHANGEABLE MESSAGE SIGN	8.00	EACH		
0340	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		

PROPOSAL BID ITEMS

Report Date 10/11/12

SECTION: 1 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
0350	02677		ASPHALT PAVE MILLING & TEXTURING	27,938.00	TON		
0360	02696		SHOULDER RUMBLE STRIPS-SAWED	141,438.00	LF		
0370	02775		ARROW PANEL	2.00	EACH		
0380	02898		RELOCATE CRASH CUSHION	2.00	EACH		
0390	02929		CRASH CUSHION TYPE IX	2.00	EACH		
0400	03171		CONCRETE BARRIER WALL TYPE 9T	1,400.00	LF		
0410	03240		BASE FAILURE REPAIR	1,001.00	SQYD		
0420	03383		PVC PIPE-4 IN	30.00	LF		
0430	04793		CONDUIT-1 1/4 IN	50.00	LF		
0440	04795		CONDUIT-2 IN	20.00	LF		
0450	04820		TRENCHING AND BACKFILLING	60.00	LF		
0460	04829		PIEZOELECTRIC SENSOR	4.00	EACH		
0470	04830		LOOP WIRE	1,500.00	LF		
0480	04895		LOOP SAW SLOT AND FILL	365.00	LF		
0490	05950		EROSION CONTROL BLANKET	15,000.00	SQYD		
0500	06412		STEEL POST MILE MARKERS	12.00	EACH		
0510	06417		FLEXIBLE DELINEATOR POST-W	317.00	EACH		
0520	06418		FLEXIBLE DELINEATOR POST-Y	83.00	EACH		
0530	06511		PAVE STRIPING-TEMP PAINT-6 IN	5,000.00	LF		
0540	06567		PAVE MARKING-THERMO STOP BAR-12IN	120.00	LF		
0550	06592		PAVEMENT MARKER TYPE V-B W/R	247.00	EACH		
0560	06593		PAVEMENT MARKER TYPE V-B Y/R	207.00	EACH		
0570	08100		CONCRETE-CLASS A	24.77	CUYD		
0580	08150		STEEL REINFORCEMENT	392.00	LB		
0590	08510		REM EPOXY BIT FOREIGN OVERLAY	2,431.00	SQYD		
0600	08526		CONC CLASS M FULL DEPTH PATCH	12.00	CUYD		
0610	08534		CONCRETE OVERLAY-LATEX	101.30	CUYD		
0620	08549		BLAST CLEANING	2,467.00	SQYD		
0630	10020NS		FUEL ADJUSTMENT	37,560.00	DOLL	$1.00	$37,560.00
0640	10030NS		ASPHALT ADJUSTMENT	66,189.00	DOLL	$1.00	$66,189.00
0650	20071EC		JOINT ADHESIVE	61,460.00	LF		
0660	20359NN		GALVANIZED STEEL CABINET	2.00	EACH		
0670	20360ES818		WOOD POST	4.00	EACH		
0680	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	2.00	EACH		
0690	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	6,225.00	LF		
0700	22664EN		WATER BLASTING EXISTING STRIPE	5,000.00	LF		

PROPOSAL BID ITEMS

Report Date 10/11/12

SECTION: 1 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
0710	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		
0720	23979EC		CRASH CUSHION TY VI CLASS C TL3	2.00	EACH		
0730	24094EC		PARTIAL DEPTH PATCHING	22.00	CUYD		
0740	24189ER		DURABLE WATERBORNE MARKING-6 IN W	85,094.00	LF		
0750	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	69,777.00	LF		
0760	24191ER		DURABLE WATERBORNE MARKING-12 IN W	5,135.00	LF		
0770	24381EC		G/R STEEL W BEAM-S FACE (NESTED)	80.00	LF		
0780	24489EC		INLAID PAVEMENT MARKER	1,522.00	EACH		

SECTION: 2 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
0790	02568		MOBILIZATION	1.00	LS		
0800	02569		DEMOBILIZATION	1.00	LS		