



CALL NO. 100

CONTRACT ID. 091059

JEFFERSON COUNTY

FED/STATE PROJECT NUMBER ARRA 264-1(164)

DESCRIPTION WATTERSON EXPRESSWAY (I-264)

WORK TYPE JPC PAVEMENT REPAIRS - DIAMOND GRINDING

PRIMARY COMPLETION DATE 5/1/2010

LETTING DATE: September 25, 2009

Sealed Bids will be received in the Division of Construction Procurement and/or the Auditorium located on the 1st floor of the Transportation Cabinet Office Building until 10:00 AM EASTERN DAYLIGHT TIME September 25, 2009. Bids will be publicly opened and read at 10:00 AM EASTERN DAYLIGHT TIME.

DBE CERTIFICATION REQUIRED - 5%

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

(Check guaranty submitted: Cashier's Check Certified Check Bid Bond)

BID BONDS WHEN SUBMITTED WILL BE RETAINED WITH THE PROPOSAL

DBE General Plan Included

BID

PROPOSAL ISSUED TO: _____

SPECIMEN

Address City State Zip

TABLE OF CONTENTS

PART I	SCOPE OF WORK
	<ul style="list-style-type: none">• PROJECT(S), COMPLETION DATE(S), & LIQUIDATED DAMAGES• CONTRACT NOTES• FEDERAL CONTRACT NOTES• ASPHALT MIXTURE• DGA BASE• DGA BASE FOR SHOULDERS• INCIDENTAL SURFACING• JPC RIDE QUALITY• SPECIAL NOTE(S) APPLICABLE TO PROJECT• RIGHT OF WAY NOTES• UTILITY CLEARANCE• COMMUNICATING ALL PROMISES
PART II	SPECIFICATIONS AND STANDARD DRAWINGS
	<ul style="list-style-type: none">• SPECIFICATIONS REFERENCE• SUPPLEMENTAL SPECIFICATIONS
PART III	EMPLOYMENT, WAGE AND RECORD REQUIREMENTS
	<ul style="list-style-type: none">• FEDERAL-AID CONSTRUCTION CONTRACTS - FHWA 1273• NONDISCRIMINATION OF EMPLOYEES• EXECUTIVE BRANCH CODE OF ETHICS• PROJECT WAGE RATES• NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EEO
PART IV	INSURANCE
PART V	BID ITEMS

PART I
SCOPE OF WORK

CONTRACT ID - 091059

ADMINISTRATIVE DISTRICT - 05

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - JEFFERSON

PCN - DE05602640959

ARRA 264-1(164)

WATTERSON EXPRESSWAY (I-264) REPAIR AND GRIND PAVEMENT ON I-264 FROM MP 12.7 TO MP 18.410.

JPC PAVEMENT REPAIRS - DIAMOND GRINDING. SYP NO. 05-02045.00.

GEOGRAPHIC COORDINATES LATITUDE 38^12'00" LONGITUDE 85^40'00"

COMPLETION DATE(S):

COMPLETION DATE - May 01, 2010

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 web site to prepare a bid packet for submission to the Department. The bidder must include the completed bid packet printed from the Program along with the disk created by said program.

JOINT VENTURE BIDDING

Joint Venture bidding is permissible. However, both companies MUST purchase a bidding proposal. Either proposal may be submitted but must contain the company names and signatures of both parties where required. 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.

01/01/2009

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating
102.08 Irregular Proposals
102.09 Proposal Guaranty

102.10 Delivery of Proposals
102.14 Disqualification of Bidders

CIVIL RIGHTS ACT OF 1964

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

NOTICE TO ALL BIDDERS

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

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

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

FHWA 1273

The requirements of Paragraph VI of FHWA 1273 does not apply to projects with a total cost of less than \$1,000,000.00.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other

subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

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

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

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

DBE GOAL

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

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

OBLIGATION OF CONTRACTORS

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

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

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

CERTIFICATION OF CONTRACT GOAL

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

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

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

DBE PARTICIPATION PLAN

All bidders are encouraged to submit their General DBE Participation Plan with their bid on the official form. Lowest responsive bidders whose bid packages include DBE Participation Plans may be awarded the contract at the next Awards Committee meeting provided that the DBE goal is met. The DBE Participation Plan shall include the following:

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

facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

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

The apparent low bidder who does not submit a General DBE Participation Plan with the bid shall submit it within 10 calendar days after receipt of notification that they are the apparent low bidder. The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Participation Plan.

Detailed DBE Participation Plan forms will be included in the Contractor Package presented to successful bidders following the awarding of the project. The Detailed DBE Participation Plan must be completed and returned to Contract Procurement in accordance with Cabinet policy. A copy of the blank estimate will be included with the Detailed DBE Participation Plan to list sequence items by PCN (Project Control Number).

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

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

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

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

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

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

9. Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10. Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
11. Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

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

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

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

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

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

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

- Disallow credit toward the DBE goal;
- Withholding progress payments;

- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

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

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal.

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

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

<http://transportation.ky.gov/construction/forms/DBEcheck.xls>

Photocopied payments and completed form to be submitted to:
Office of Civil Rights and Small Business Development
6th Floor West
200 Mero Street
Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

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

06/29/2009

KYTC
DBE Payments

updated 2/28/08

Prime Contractor		Cont-ID	
DBE Contractor		CHECK #	
PAYMENT DATE		Amount of Payment	
Use the section below to show multiple payments using the same check			
Cont-ID	Amount	Cont-ID	Amount

Comments:

attach copy of check here

Mail to:
Office of Civil Rights and Small Business Development
200 Mero Street
6th Floor West TCOB
Frankfort, KY 40622

to be Submitted within 7 days of receipt of payment from KYTC

ASPHALT MIXTURE

The rate of application for all asphalt mixtures shall be estimated at 110 lbs/sy per inch of depth, unless otherwise noted.

DGA BASE

The rate of application for DGA Base shall be estimated at 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

The rate of application shall be estimated at 115 lbs/sy per inch of depth. Payment for necessary grading and/or shaping of existing shoulders prior to placing of Dense Graded Aggregate Base shall be included in the unit price bid per ton for Dense Graded Aggregate Base.

INCIDENTAL SURFACING

The quantities established in the proposal include estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, and road and street approaches. These items are to be paved to the limits as shown on Standard Drawing RPM 110 or to the limits as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, the paving of the crossroads shall be to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. These areas are to be surfaced or resurfaced as directed by the Engineer and no direct payment will be allowed for placing and compacting.

JPC RIDE QUALITY

JPC Pavement Smoothness requirements shall apply on this project in accordance with Section 501 of the current Standard Specifications.

I-264 STATIONING REFERENCES

STATION	FEATURE
274+00.	END EB ENT RAMP GORE STRIPING FROM I-65
285+84.06	CURTIS AVENUE
292+00.	WESTBOUND OVERHEAD TRUSS SIGN
292+94.	WESTBOUND MILEPOST 13 SIGN
294+50.	EASTBOUND OVERHEAD TRUSS SIGN
300+00	POPLAR LEVEL EXIT SIGN IN GORE
310+00.	MILEPOST 13.4 SIGN
311+93.43	POPLAR LEVEL ROAD
316+40.	WESTBOUND OVERHEAD CANTILEVER TRUSS SIGN
321+75.	CRASH CUSHION AT WB EXIT TO POPLAR LEVEL
324+90.	WESTBOUND OVERHEAD TRUSS SIGN
342+50.	WESTBOUND OVERHEAD TRUSS SIGN
342+97.	WESTBOUND MILEPOST 14 SIGN
348+00.	EASTBOUND OVERHEAD CANTILEVER TRUSS SIGN
352+00.	EQUATION 352+00 BK = 355+75.07 AHD
361+58.	END WB ENT RAMP GORE STRIPING FROM NEWBURG
362+75.	BEGIN EB EXIT RAMP TAPER TO NEWBURG
366+10.	EASTBOUND OVERHEAD TRUSS SIGN
366+50.	WESTBOUND OVERHEAD TRUSS SIGN
375+34.75	NEWBURG ROAD
383+50.	WESTBOUND OVERHEAD TRUSS SIGN
400+55.	WESTBOUND MILEPOST 15 SIGN
400+75.	WESTBOUND OVERHEAD TRUSS SIGN
401+50.	EASTBOUND OVERHEAD CANTILEVER TRUSS SIGN
417+36.58	BEGIN EB EXIT RAMP TAPER TO BARDSTOWN
420+50.	EASTBOUND OVERHEAD TRUSS SIGN
436+20.	BEGIN BRIDGE OVER BARDSTOWN
437+31.46	BARDSTOWN ROAD
438+40.	END BRIDGE OVER BARDSTOWN
451+75.	WESTBOUND OVERHEAD TRUSS SIGN
452+26.	EASTBOUND MILEPOST 16 SIGN
452+35.	WESTBOUND MILEPOST 16 SIGN
458+85.33	EQUATION 458+85.33 BK = 521+49.08 AHD
526+00.	EASTBOUND OVERHEAD TRUSS SIGN
532+50.	WESTBOUND OVERHEAD CANTILEVER TRUSS SIGN
554+00.	EASTBOUND OVERHEAD TRUSS SIGN
565+73.	EASTBOUND MILEPOST 17 SIGN
565+80.	WESTBOUND MILEPOST 17 SIGN
569+21.67	TAYLORSVILLE ROAD
577+50.	WESTBOUND OVERHEAD TRUSS SIGN
593+50.	WESTBOUND OVERHEAD TRUSS SIGN
593+96.64	EQUATION 593+96.64 BK = 594+00 AHD
598+00.	EASTBOUND OVERHEAD TRUSS SIGN
607+75.	EASTBOUND OVERHEAD TRUSS SIGN OVER C-D ROAD
616+75.	EASTBOUND MILEPOST 18 SIGN
618+34.76	BRECKINRIDGE LANE
628+00.	WESTBOUND OVERHEAD TRUSS SIGN
638+50.	WESTBOUND OVERHEAD TRUSS SIGN
641+00.	EASTBOUND OVERHEAD TRUSS SIGN
649+21.54	Browns Lane

DIAMOND GRINDING SUMMARY
JEFFERSON COUNTY
I-264 - WATTERSON EXPRESSWAY
Item Numbers: 5-2045.00 & 5-2047.00
EASTBOUND

DIRECTION	NUMBER OF LANES	BEGIN STATION	END STATION	LINEAR LANE- FEET	* SQUARE YARDS
Eastbound	5	275+50	285+07	957	6,593
Eastbound	5	287+61	290+04	243	1,674
Eastbound	5	290+38	292+00	162	1,116
Eastbound	6	292+00	295+36	336	2,763
Eastbound	4	295+36	327+25	3,189	17,717
Eastbound	5	327+25	338+25	1,100	7,578
Eastbound	4	338+25	352+00	1,375	7,639
Eastbound	4	355+75	362+80	705	3,916
Eastbound	5	362+80	365+35	255	1,757
Eastbound	4	365+35	389+10	2,375	13,194
Eastbound	6	389+10	401+17	1,207	9,924
Eastbound	5	401+17	401+72	55	379
Eastbound	5	402+54	417+39	1,485	10,230
Eastbound	6	417+39	420+20	281	2,310
Eastbound	4	420+20	436+18	1,598	8,878
Eastbound	4	438+34	448+00	966	5,367
Eastbound	5	448+00	458+85	1,085	7,477
Eastbound	5	521+49	550+78	2,929	20,177
Eastbound	6	550+78	553+05	227	1,866
Eastbound	5	553+05	567+96	1,491	10,271
Eastbound	5	570+48	571+52	104	716
Eastbound	6	571+52	573+17	165	1,357
Eastbound	5	573+17	586+06	1,289	8,880
Eastbound	6	586+06	593+97	791	6,504
Eastbound	6	594+00	608+31	1,431	11,766
Eastbound	5	608+31	614+00	569	3,920
Eastbound	6	614+00	620+19	619	5,090
Eastbound	5	620+19	633+21	1,302	8,969
Eastbound	6	633+21	639+65	644	5,295
Eastbound	5	639+65	640+50	85	586
TOTAL EASTBOUND LINEAR LANE- FEET				29,020	
EASTBOUND TOTAL PCC PAVEMENT DIAMOND GRINDING (Item No. 2060)					193,908

* THE INTERIOR LANE IS 14 FT WIDE, INSTEAD OF 12 FT, IN BOTH DIRECTIONS.

**EASTBOUND
TRAFFIC LOOPS**

290+04	290+38
359+89	360+02
400+42	400+86
541+96	542+13
589+85	590+07

NOT INCLUDED (DO NOT GRIND)
INCLUDED (GRIND)
INCLUDED (GRIND)
INCLUDED (GRIND)
INCLUDED (GRIND)

BRIDGES (NOT INCLUDED)

Bridge over Railroad and Curtis Ave.
Bridge over S Fork of Beargrass Crk.
Bridge over Bardstown Road
Bridge over Taylorsville Road

285+07	287+61
401+72	402+54
436+18	438+34
567+96	570+48

STATION EQUATIONS

Back	Ahead
352+00.00	355+75.07
458+85.33	521+49.08
593+96.64	594+00.00

DIAMOND GRINDING SUMMARY
JEFFERSON COUNTY
I-264 - WATTERSON EXPRESSWAY
Item Numbers: 5-2045.00 & 5-2047.00
WESTBOUND

DIRECTION	NUMBER OF LANES	BEGIN STATION	END STATION	LINEAR LANE- FEET	* SQUARE YARDS
Westbound	5	275+50	285+07	957	6,593
Westbound	5	287+61	292+00	439	3,024
Westbound	6	292+00	293+16	116	954
Westbound	6	293+47	296+89	342	2,812
Westbound	4	296+89	325+03	2,814	15,633
Westbound	5	325+03	328+03	300	2,067
Westbound	4	328+03	346+17	1,814	10,078
Westbound	5	346+17	352+00	583	4,016
Westbound	5	355+75	361+58	583	4,016
Westbound	4	361+58	374+75	1,317	7,317
Westbound	5	374+75	377+75	300	2,067
Westbound	4	377+75	383+47	572	3,178
Westbound	5	383+47	386+68	321	2,211
Westbound	4	386+68	395+28	860	4,778
Westbound	5	395+28	401+72	644	4,436
Westbound	5	402+54	417+04	1,450	9,989
Westbound	6	417+04	424+87	783	6,438
Westbound	4	424+87	436+18	1,131	6,283
Westbound	4	438+34	453+30	1,496	8,311
Westbound	6	453+30	456+77	347	2,853
Westbound	5	456+77	458+85	208	1,435
Westbound	5	521+49	540+19	1,870	12,882
Westbound	6	540+19	547+00	681	5,599
Westbound	4	547+00	566+38	1,938	10,767
Westbound	5	566+38	567+96	158	1,088
Westbound	4	570+48	578+55	807	4,483
Westbound	5	578+55	580+98	243	1,674
Westbound	4	580+98	593+97	1,299	7,217
Westbound	4	594+00	595+12	112	622
Westbound	5	595+12	605+96	1,084	7,468
Westbound	4	605+96	620+65	1,469	8,161
Westbound	5	620+65	623+45	280	1,929
Westbound	4	623+45	629+54	609	3,383
Westbound	5	629+54	632+04	250	1,722
Westbound	4	632+04	640+50	846	4,700
TOTAL WESTBOUND LINEAR LANE- FEET				29,023	
WESTBOUND TOTAL PCC PAVEMENT DIAMOND GRINDING (Item No. 2060)					180,184
PROJECT TOTAL PCC PAVEMENT DIAMOND GRINDING (Item No. 2060)					374,092

* THE INTERIOR LANE IS 14 FT WIDE, INSTEAD OF 12 FT, IN BOTH DIRECTIONS.

WESTBOUND TRAFFIC LOOPS (INCLUDED)

293+16	293+47
334+53	334+63
400+32	400+78
531+86	532+00
583+38	583+54

NOT INCLUDED (DO NOT GRIND)
INCLUDED (GRIND)
INCLUDED (GRIND)
INCLUDED (GRIND)
INCLUDED (GRIND)

BRIDGES (NOT INCLUDED)

Bridge over Railroad and Curtis Ave.
Bridge over S Fork of Beargrass Crk.
Bridge over Bardstown Road
Bridge over Taylorsville Road

285+07	287+61
401+72	402+54
436+18	438+34
567+96	570+48

STATION EQUATIONS

Back	Ahead
352+00.00	355+75.07
458+85.33	521+49.08
593+96.64	594+00.00

**FULL DEPTH PCC PAVEMENT REPAIRS
I-264, JEFFERSON COUNTY
ITEM NUMBERS: 5-2045.00 & 5-2047.00
EASTBOUND**

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1*	LANE #2*	LANE #3*	LANE #4*	LANE #5*	TOTAL SQ. YDS.	COMMENTS	
275+50	276+14	64				X		85		
277+35	277+72	37			X			49		
277+94	278+34	40			X			53		
278+94	279+90	96			X			128		
281+53	281+96	43	X					67		
281+87	282+03	16					X	21		
284+04	284+43	39			X			52		
284+69	284+75	6			X			8		
284+80	285+67	87					X	116		
284+94	285+39	45		X				60		
284+94	285+48	54			X			72		
284+94	285+58	64				X		85		
285+15	285+76	61	RT SHOULDER						81	
287+73	288+52	79		X				105		
287+85	288+55	70			X			93		
287+93	288+55	62				X		83		
288+00	288+55	55					X	73		
288+84	288+97	13		X				17		
288+91	289+14	23				X		31		
290+91	292+45	154				X		205	END STATION MATCH RAMP STATION = 10+45	
288+93	288+99	6			X			8		
288+96	289+70	74					X	99		
297+46	299+23	177				X		236		
298+12	298+33	21		X				28		
299+63	299+78	15	X					23		
299+64	299+82	18		X				24		
299+84	299+98	14			X			19		
304+52	304+82	30			X			40		
304+65	304+82	17		X				23		
308+30	310+00	170			X			227		
311+41	312+79	138		X				184		
314+09	314+97	88		X				117		
314+09	314+97	88			X			117		
315+59	318+00	241			X			321		
325+03	325+33	30			X			40		
325+46	327+29	183					X	244	END STATION MATCH RAMP STATION = 27+29	
330+63	330+85	22		X				29		
331+48	332+22	74					X	99		
331+93	332+37	44				X		59		
334+03	335+02	99				X		132		
337+68	340+90	322				X		429		
340+00	340+88	88			X			117		
340+73	340+91	18	X					28		
340+73	340+91	18		X				24		
344+93	345+21	28		X				37		
351+88	352+08	20			X			27	STA. EQUATION 352+00 BK = 355+75.07 AHD	
364+75	365+18	43			X			57		
368+97	369+13	16			X			21		
377+78	378+01	23		X				31		
377+82	378+01	19			X			25		
377+86	378+01	15				X		20		
380+18	382+00	182			X			243		
380+18	382+18	200				X		267		
385+53	387+83	230				X		307		
386+28	391+07	479			X			639	END STATION MATCH RAMP STATION = 513+39	
392+58	395+13	255		X				340	BEGIN STATION MATCH RAMP STATION = 514+90 END STATION MATCH RAMP STATION = 517+45	
392+58	393+00	42			X			56	BEGIN STATION MATCH RAMP STATION = 514+90 END STATION MATCH RAMP STATION = 515+33	

**FULL DEPTH PCC PAVEMENT REPAIRS
I-264, JEFFERSON COUNTY
ITEM NUMBERS: 5-2045.00 & 5-2047.00
EASTBOUND**

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1*	LANE #2*	LANE #3*	LANE #4*	LANE #5*	TOTAL SQ. YDS.	COMMENTS
393+68	394+28	60			X			80	BEGIN STATION MATCH RAMP STATION = 516+00 END STATION MATCH RAMP STATION = 516+60
394+53	394+88	35			X			47	BEGIN STATION MATCH RAMP STATION = 516+85 END STATION MATCH RAMP STATION = 517+20
395+19	395+59	40				X		53	BEGIN STATION MATCH RAMP STATION = 517+51 END STATION MATCH RAMP STATION = 517+91
395+72	396+63	91			X			121	BEGIN STATION MATCH RAMP STATION = 518+04 END STATION MATCH RAMP STATION = 518+95
395+80	396+63	83				X		111	BEGIN STATION MATCH RAMP STATION = 518+12 END STATION MATCH RAMP STATION = 518+95
397+10	397+43	33		X				44	
397+62	397+92	30			X			40	BEGIN STATION MATCH RAMP STATION = 519+94 END STATION MATCH RAMP STATION = 520+24
398+22	398+53	31		X				41	
398+98	401+87	289		X				385	
400+59	400+94	35			X			47	
400+59	401+31	72				X		96	
401+87	402+01	14					X	19	
405+40	406+27	87		X				116	
405+42	416+12	1070			X			1427	
408+55	416+70	815		X				1087	
417+64	418+59	95		X				127	
419+46	421+67	221			X			295	
421+07	421+63	56				X		75	
422+89	424+00	111			X			148	
425+33	425+58	25				X		33	
426+38	427+42	104		X				139	
426+38	429+11	273			X			364	
426+75	426+84	9	X					14	
429+89	435+72	583			X			777	
432+15	432+35	20				X		27	REINFORCED CONC REQUIRES FORMING
433+93	434+52	59				X		79	
435+22	435+50	28		X				37	
435+27	435+52	25				X		33	
438+94	439+22	28				X		37	
439+85	440+10	25			X			33	
441+85	442+22	37		X				49	
444+10	444+52	42			X			56	
444+88	446+30	142		X				189	
448+35	455+10	675			X			900	BEGIN STATION MATCH RAMP STATION = 41+09
449+02	449+16	14				X		19	BEGIN STATION MATCH RAMP STATION = 41+76 END STATION MATCH RAMP STATION = 41+90
452+23	453+24	101				X		135	
454+62	455+12	50				X		67	
455+96	456+26	30			X			40	
521+76	522+14	38		X				51	STA. EQN. 458+85.33 BK = 521+49.08 AHD
521+76	522+14	38			X			51	STA. EQN. 458+85.33 BK = 521+49.08 AHD

**FULL DEPTH PCC PAVEMENT REPAIRS
I-264, JEFFERSON COUNTY
ITEM NUMBERS: 5-2045.00 & 5-2047.00
EASTBOUND**

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1*	LANE #2*	LANE #3*	LANE #4*	LANE #5*	TOTAL SQ. YDS.	COMMENTS
522+26	522+91	65				X		87	STA. EQN. 458+85.33 BK = 521+49.08 AHD
526+53	526+95	42				X		56	
526+94	527+39	45		X				60	
528+59	529+05	46		X				61	
529+77	530+07	30	X					47	
531+23	531+80	57				X		76	
547+50	547+62	12					X	16	
548+52	548+95	43				X		57	
548+72	548+85	13					X	17	
556+30	556+88	58				X		77	
558+10	558+23	13				X		17	
563+20	564+66	146				X		195	
563+93	564+18	25			X			33	
571+18	572+09	91				X		121	
598+95	599+27	32			X			43	
601+37	601+67	30			X			40	
616+87	617+10	23				X		31	
618+88	619+50	62			X			83	
619+25	619+50	25				X		33	
620+65	624+00	335		X				447	
622+82	623+23	41	I-264 ENTRANCE RAMP FROM NB BRECKENRIDGE RD. REPAIR RAMP PAVEMENT					55	NB BRECKENRIDGE RD ENT RAMP PVMT
624+64	625+05	41	I-264 ENTRANCE RAMP FROM NB BRECKENRIDGE RD. REPAIR RAMP PAVEMENT					55	NB BRECKENRIDGE RD ENT RAMP PVMT
626+47	626+88	41	I-264 ENTRANCE RAMP FROM NB BRECKENRIDGE RD. REPAIR RAMP PAVEMENT					55	NB BRECKENRIDGE RD ENT RAMP PVMT
EASTBOUND TOTAL (SQ YDS.)								15,472	

* LANE NUMBERS BEGIN WITH THE LANE CLOSEST TO THE I-264 CENTERLINE, AND INCREASE AS YOU MOVE AWAY FROM THE CENTERLINE. IN OTHER WORDS, LANE #3 IS THE THIRD LANE RIGHT OF THE CENTERLINE.

**FULL DEPTH PCC PAVEMENT REPAIRS
I-264, JEFFERSON COUNTY
ITEM NUMBERS: 5-2045.00 & 5-2047.00
WESTBOUND**

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1*	LANE #2*	LANE #3*	LANE #4*	LANE #5*	TOTAL SQ. YDS.	COMMENTS
276+50	281+24	474				X		632	
282+36	282+55	19			X			25	
283+19	284+58	139				X		185	
284+19	284+49	30					X	40	
287+15	288+73	158					X	211	
287+22	288+73	151				X		201	
287+29	288+25	96			X			128	
291+96	292+77	81				X		108	BEGIN STATION MATCH RAMP STATION = 31+23 END STATION MATCH RAMP STATION = 32+04
295+90	299+29	339				X		452	
297+80	298+72	92			X			123	
301+69	301+97	28				X		37	
301+77	301+87	10		X				13	
304+38	304+85	47				X		63	
304+60	305+60	100	X					156	
304+85	305+11	26			X			35	
306+28	308+07	179			X			239	
306+28	311+44	516				X		688	
307+52	307+85	33		X				44	
310+46	310+86	40		X				53	
310+46	311+30	84			X			112	
313+69	320+77	708			X			944	
313+69	320+77	708				X		944	
315+80	320+30	450		X				600	
324+80	325+05	25			X			33	
324+80	325+05	25				X		33	
337+15	337+60	45				X		60	
347+91	349+38	147			X			196	BEGIN STATION MATCH RAMP STATION = 619+78 RAMP STA. 349+74.93 = I-264 STA. 618+95.12
348+44	348+74	30				X		40	
348+76	348+90	14		X				19	BEGIN STATION MATCH RAMP STATION = 619+80 END STATION MATCH RAMP STATION = 619+94 RAMP STA. 349+74.93 = I-264 STA. 618+95.12
350+27	351+20	93			X			124	
359+28	359+53	25				X		33	
371+59	371+89	30			X			40	
371+69	372+34	65				X		87	
372+93	373+93	100			X			133	
372+93	373+56	63				X		84	
373+93	374+28	35				X		47	
375+17	375+48	31			X			41	
375+73	387+00	1127			X			1503	
376+41	376+57	16		X				21	
377+79	378+37	58	X					90	
378+77	385+20	643		X				857	
379+34	380+78	144				X		192	
381+66	382+39	73				X		97	
383+45	386+22	277				X		369	
384+79	385+02	23					X	31	
394+81	396+27	146		X				195	
394+90	395+26	36			X			48	
398+70	401+47	277				X		369	
400+12	401+50	138			X			184	
401+18	401+55	37		X				49	
402+35	403+23	88			X			117	
407+28	416+28	900			X			1200	
407+48	414+05	657		X				876	
408+25	408+41	16				X		21	
409+65	415+08	543				X		724	
414+90	415+37	47		X				63	
417+12	417+88	76			X			101	

**FULL DEPTH PCC PAVEMENT REPAIRS
I-264, JEFFERSON COUNTY
ITEM NUMBERS: 5-2045.00 & 5-2047.00
WESTBOUND**

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1*	LANE #2*	LANE #3*	LANE #4*	LANE #5*	TOTAL SQ. YDS.	COMMENTS
420+34	420+51	17			X			23	
420+95	421+13	18			X			24	
438+58	439+02	44		X				59	
438+78	439+14	36			X			48	
438+98	439+33	35				X		47	
443+79	445+63	184			X			245	
457+14	457+49	35				X		47	
457+27	457+46	19			X			25	STA. EQN. 458+85.33 BK = 521+49.08 AHD
551+55	552+66	111		X				148	
557+71	559+46	175			X			233	
560+27	560+72	45	X					70	
566+74	567+01	27					X	36	
566+89	567+18	29				X		39	
573+92	574+25	33			X			44	
584+52	585+10	58		X				77	
592+73	592+89	16				X		21	
594+28	594+69	41			X			55	
597+93	598+30	37			X			49	
599+53	600+10	57			X			76	
600+43	600+56	13				X		17	
600+70	601+87	117					X	156	
601+32	601+65	33			X			44	
601+39	601+68	29		X				39	
603+91	604+17	26			X			35	
605+79	606+05	26					X	35	
614+00	614+40	40		X				53	
620+50	621+58	108		X				144	
620+97	623+97	300			X			400	
621+04	624+18	314				X		419	
623+39	624+41	102		X				136	
630+00	630+13	13		X				17	
631+68	637+67	599		X				799	
632+00	633+75	175	X					272	
632+98	633+31	33			X			44	
634+21	634+33	12	X					19	
638+52	638+70	18		X				24	
639+58	640+50	92		X				123	
640+39	640+50	11	X					17	
WESTBOUND TOTAL (SQ YDS.)								18,270	
MAINLINE TOTAL (SQ YDS.)								33,743	

* LANE NUMBERS BEGIN WITH THE LANE CLOSEST TO THE I-264 CENTERLINE, AND INCREASE AS YOU MOVE AWAY FROM THE CENTERLINE. IN OTHER WORDS, LANE #3 IS THE THIRD LANE LEFT OF THE CENTERLINE.

**FULL DEPTH PCC PAVEMENT REPAIRS
I-264, JEFFERSON COUNTY
ITEM NUMBERS: 5-2045.00 & 5-2047.00
EASTBOUND RAMPS**

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1	LANE #2	LANE #3	LANE #4	LANE #5	LANE #6	TOTAL SQ. YDS.	COMMENTS
POPLAR LEVEL ROAD EXIT RAMP (3 LANES)										
20+60	20+77	17		X					23	
21+02	21+47	45		X					60	
POPLAR LEVEL ROAD ENTRANCE RAMP										
19+84	20+11	27	X						45	
NEWBURG ROAD EXIT RAMP										
107+29	108+76	147	X						245	
NEWBURG ROAD ENTRANCE RAMP										
503+80	504+53	73	X						130	
506+51	507+26	75		X					133	
BARDSTOWN ROAD EXIT RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
BARDSTOWN ROAD ENTRANCE RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
WB TAYLORSVILLE ROAD EXIT RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
EB TAYLORSVILLE ROAD EXIT RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
TAYLORSVILLE ROAD ENTRANCE RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
NB BRECKENRIDGE ROAD EXIT RAMP										
508+00	514+00	600							1067	
516+20	518+50	230							409	
SB BRECKENRIDGE ROAD ENTRANCE RAMP										
807+30	813+20	590							1049	
SB BRECKENRIDGE ROAD EXIT RAMP										
420+20	420+54	34							60	
421+22	425+62	440							782	
NB BRECKENRIDGE ROAD ENTRANCE RAMP										
314+15	317+24	309							515	
317+92	321+30	338							563	
323+65	324+91	126							210	
EASTBOUND RAMP TOTAL (SQ YDS.)									5,291	

**FULL DEPTH PCC PAVEMENT REPAIRS
I-264, JEFFERSON COUNTY
ITEM NUMBERS: 5-2045.00 & 5-2047.00
WESTBOUND RAMPS**

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1	LANE #2	LANE #3	LANE #4	LANE #5	LANE #6	TOTAL SQ. YDS.	COMMENTS
POPLAR LEVEL ROAD ENTRANCE RAMP										
12+70	12+75	5	X						10	REPLACE CURB ALSO
NO FULL DEPTH REPAIRS REQUIRED										
POPLAR LEVEL ROAD EXIT RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
NEWBURG ROAD ENTRANCE RAMP										
600+40	601+14	74	X						132	
607+44	607+85	41	X						41	HALF SLAB REPLACEMENT
NB NEWBURG ROAD EXIT RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
SB NEWBURG ROAD EXIT RAMP										
207+35	208+68	133	X						236	
209+74	210+11	37	X						66	
210+66	211+86	120	X						213	
212+47	213+97	150	X						267	
BARDSTOWN ROAD ENTRANCE RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
BARDSTOWN ROAD EXIT RAMP										
NO FULL DEPTH REPAIRS REQUIRED										
EB TAYLORSVILLE ROAD EXIT RAMP										
202+66	203+46	80	X						164	IN RAMP TAPER
209+29	209+39	10	X						18	
WB TAYLORSVILLE ROAD EXIT RAMP										
111+68	111+80	12	X						21	PART WIDTH REPLACEMENT
TAYLORSVILLE ROAD ENTRANCE RAMP										
411+50	411+58	8		X					11	
BRECKENRIDGE ROAD ENTRANCE RAMP										
710+28	710+68	40		X					71	
10+92	13+39	247	X						439	WB TAYLORSVILLE TRAFFIC
711+59	713+90	231		X					411	
SB BRECKENRIDGE ROAD EXIT RAMP										
820+18	821+08	90	X						150	
822+87	826+45	358	X						597	
827+80	828+55	75	X						125	STATIONS NOT IDENTIFIED
NB BRECKENRIDGE ROAD EXIT RAMP										
127+76	128+08	32	X						28	HALF SLAB REPLACEMENT
131+68	131+85	17	X						23	
132+73	132+87	14		X					19	
132+50	132+70	20	X						27	
133+92	134+06	14		X					19	
WESTBOUND RAMP TOTAL (SQ YDS.)									3,086	
RAMP PROJECT TOTAL (SQ YDS.)									8,377	
MAINLINE AND RAMP PROJECT TOTAL (SQ YDS.)									42,120	

**SPECIAL NOTES FOR JPC PAVEMENT
DIAMOND GRINDING REHABILITATION
JEFFERSON COUNTY
I-264 WATTERSON EXPRESSWAY
ARRA 264-1(164)
FD52 056 0264 012-019
Item Nos. 5-2045.00 & 5-2047.00**

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

SPECIAL PROVISION 76 HAS BEEN SUPERSEDED BY THE SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR AND THE SPECIAL NOTE FOR PARTIAL DEPTH CONCRETE PAVEMENT REPAIR. APPLY THESE NOTES FOR ANY REFERENCES TO SPECIAL PROVISION 76.

SPECIAL NOTE FOR REFERENCES TO SPECIAL PROVISION 76

Special Provision 76 has been superseded by the Special Note for Full Depth Concrete Pavement Repair and the Special Note for Partial Depth Concrete Pavement Repair. Apply these notes for any references to Special Provision 76.

I. DESCRIPTION

Perform all work in accordance with the Department's 2008 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 JPC Pavement at the locations listed and/or as directed by the Engineer;
- (3) Diamond Grinding JPC Pavement and Permanent Striping;
- (4) Re-saw and seal joint seals;
- (5) Remove and replace Guardrail and Guardrail End treatments at the locations listed and/or as directed by the Engineer;
- (6) Type V pavement markers; 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. **Joint and Crack Sealing.** For joints and cracks, use Hot-Poured Elastic Joint Sealant conforming to section 807.03.01.
- C. **Dense Graded Aggregate.** Contrary to Special Provision No. 76, Crushed Stone Base may not be furnished in lieu of DGA.
- D. **Jointed Plain Concrete Pavement 11".** Use Jointed Plain Concrete Pavement 11" for full depth replacement of concrete pavement in driving lanes. Either central mixing or truck mixing will be allowed.
- E. **Partial Depth Patching.** Contrary to Special Provision 76, use Polymer Patch Repair for Partial Depth Patching.
- F. **Pavement Markings -6 inch Tape.** Use Durable Type 1 6-inch Tape for permanent striping (12 inch at entrance and exit ramp tapers). See section 714 of the Standard Specifications.
- G. **Crushed Aggregate Size No. 2.** Crushed Aggregate Size No. 2 will be limestone.
- H. **Channel Lining Class II.** Channel lining will be limestone and is to be placed at pipe outlets with significant erosion as noted and/or as directed by the Engineer.
- I. **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.

II. 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. **Concrete Pavement Removal and Replacement.** Except as specified in these notes, perform full depth concrete pavement removal and replacement in accordance with Special Provision No. 76. Approximate removal locations are listed in the proposal. The Engineer will determine actual locations at the time of construction, and may add to the listed repairs if deemed necessary. Remove pavement for full depth repairs by a saw cut and lift method without disturbing the underlying base or damaging the adjacent pavement remaining in place. Do not "pre-saw" in advance until ready for slab removal within the same day. (The Engineer will not allow the slab to be sawed and then to remain in place for more than one day.) Do not hammer or break pavement by other means to facilitate removal. Do not oversaw into existing JPC Pavement not intended to be removed. The original nominal depth of the mainline JPC pavement is 11 inches. However, the finished grade will be transitioned to match the adjacent pavement to remain in place. Gang drills, capable of drilling a minimum of four holes at a time, are required for dowel, hook bolt, and tie bar placement, unless otherwise approved by the Engineer.

It is intended to not disturb the underlying soil, however, a quantity of DGA, Crushed Aggregate #2, Geotextile Fabric Type IV, 4" Perforated pipe and 4" Non-perforated pipe (to drain the aggregate) and Perforated Pipe Headwalls is included for undercutting very poor, soft, wet soils - to be used sparingly and only as directed by the Engineer. Undercutting will not be measured as a bid item and will be considered incidental to the items of work listed above.

Use of a maturity meter is permitted to verify that JPC is ready for traffic, but is considered incidental to 11" JPC Pavement.

- D. **Partial Depth Patching.** Except as specified in these notes, perform Partial Depth Patching in accordance with Special Provision No. 76 Concrete Pavement Replacement and Repair. The Engineer will determine the removal locations. It is intended that the Polymer Patching material be used to fill these corner breaks without grinding and preparing the hole. The Engineer will determine actual locations at the time of construction. The holes left from the removal of Type V Pavement Markers are included in the Partial Depth Patching Quantity. This material may be Diamond Ground.

- E. **Diamond Grinding.** After removing type V pavement markers, fill the void left. Repair the JPC pavement and Diamond Grind the mainline JPC pavement. Stations listed in the summary are approximate only; the Engineer will designate actual locations at the time of construction. Make one or more passes with the grinding equipment as needed to obtain the rideability required by Section 503.03.09. Omit grinding on ramps, bridge decks and the Automatic Traffic Recorder Collection Stations at Approx. Sta. 290+20 (EB) and Sta. 293+30 (WB). Perform additional grinding as directed by the Engineer to provide smooth transitions between traffic lanes and between ground and unground areas. Clean and sweep Diamond Ground areas before opening those areas to traffic. Sweeping associated with Diamond Grinding is incidental to Diamond Grinding. Dispose of all grindings/shavings/debris off site at locations approved by the Engineer.
- F. **Joint and Crack Sealing.** After diamond grinding, saw, clean, and reseal transverse and longitudinal joints including those on the shoulder and other joints as designated by the Engineer Do not widen existing joint more than the absolute minimum required to provide a clean, new face for a reservoir for the new joint seal. Contrary to section 501.03.17, skew the transverse joints to match existing joints. Route, clean, and seal random cracks that are faulted or random cracks greater than 1/16" designated by the Engineer. Route to a depth of approximately 1" and to a width of approximately 1/2". Clean the routed crack by blowing with compressed air. Assure that the routed crack is dry before using the Hot-Poured Elastic Sealer.
- G. **Edge Drains.** Quantities listed are approximate only. Actual quantities will be determined at the time of construction. Any excavation will be incidental to the other items of associated work. Any grading and ditching necessary to provide positive drainage at the headwall outlet will be paid at the unit bid price for "Ditching".
- H. **Automatic Traffic Recorders.** See Special Notes applicable to Project for information on work to be performed at approximately Eastbound STAS. 359+96, 400+65, 542+05, and 589+96 and Westbound STAS 334+58, 400+55, 531+93 and 583+46.
- I. **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.
- J. **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.

- K. **Guardrail.** Remove and replace 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. Deliver removed rail to the Bailey Bridge Yard in Frankfort. There is a guardrail delivery verification sheet which must be completed.
- L. **Pavement Striping and Pavement Markers.** Permanent striping will be in accordance with Section 112 and section 714, except that:
- (1). Striping will be 6" in width;
 - (2). Permanent striping will be in place before a lane is opened to traffic; and
 - (3). Permanent striping will be 6" Durable Type 1 tape.
- M. **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.
- N. **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.
- O. **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.** Crushed Aggregate will be used in the event it is necessary to stabilize under any of the full depth slab removal. Payment will be based on the tons used for stabilization and the tons used around the perforated pipe outlet headwalls.

- D. **Dense Graded Aggregate.** DGA will be used in the event it is necessary to stabilize under any of the full depth slab removal. A 4 inch lift will be placed on the Crushed Aggregate No. 2s.
- E. **Remove JPC Pavement.** Cement concrete pavement removed in full depth pavement repair areas will be measured in square yards, regardless of thickness. See Special Provision 76.
- F. **JPC Pavement -11"-24 HR.** See Special Provision No. 76. No additional payment will be made for any additional concrete required due to a depth beyond 11". If any rumble strips are required on any of the shoulders, they shall be considered incidental to this work.
- G. **Saw Clean Seal Joints.** Longitudinal and transverse cracks sawed, cleaned, and sealed will be measured in linear feet.
- H. **Epoxy Resin Systems.** Epoxy Resin Systems will not be measured for payment, but will be incidental to JPC Pavement 11"-24HR.
- I. **Partial Depth Patching.** Partial Depth Patching is measured by the cubic foot according to Special Provision 76 and includes areas repaired from removing Type V Pavement Markers.
- J. **Smooth Dowels, Deformed Tie Bars and Hook Bolts.** Smooth dowels, deformed tie bars, hook bolts, and joint sealing at JPC pavement repair areas will not be measured for payment, but will be incidental to JPC Pavement 11"-24HR.
- K. **Raised Pavement Markers and Permanent Striping.** Permanent striping tape (6" and 12") is measured per linear foot. See Traffic Control Plan. Type V Pavement Markers are measured as each.
- L. **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 "Erosion Control".
- M. **Fabric Geotextile Type IV.** Fabric Geotextile Type IV will be measured per square yard and is to be used to wrap crushed aggregate No. 2 for sinkhole treatment.
- N. **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.
- O. **Undercutting.** Undercutting will not be measured for payment, but will be incidental to other items of work.
- P. **Embankment.** Embankment is measured by cubic yard and is to be placed in pipe extension locations, slope stabilization areas and as directed by the Engineer.

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. **Remove JPC Pavement.** See Special Provision 76.
- E. **JPC Pavement -11".** See Special Provision No. 76. No additional payment will be made for any additional concrete required due to a depth beyond 11".
- F. **Raised Pavement Markers and Permanent Striping.** See Traffic Control Plan.

**NOTES APPLICABLE TO PROJECT
DIAMOND GRINDING REHABILITATION
JEFFERSON COUNTY
I-264 WATTERSON EXPRESSWAY
ARRA 264-1(164)
FD52 056 0264 012-019
Item Nos. 5-2045.00 & 5-2047.00**

1. There is a summary of full depth concrete repair locations. Also, because of continuing deterioration of the pavement, there is an additional quantity of repairs included in the bid total. 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 Department. Any asphalt patches removed and its disposal will be incidental to the underlying "Remove PCC Pavement" bid item.
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 or diamond ground 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 in the Proposal.
3. There are five (5) sets of existing Automatic Traffic Recorders (ATR) for each direction within the limits of the project. The approximate locations of these ATRs are shown on the Diamond Grinding Summary. The ATRs at Approx. Sta. 290+20 (EB) and Sta. 293+30 (WB) should not be disturbed. The contractor is to taper the Diamond Grinding in order to avoid these two (2) ATR locations. Any damage to these two (2) ATRs caused by the contractor's operations must be repaired at the contractor's expense. The contractor is Diamond Grind through the remaining loops within the project limits. Damaged loops will be replaced with this project.
4. The contractor is to be advised of the locations of low wires on the project. These locations include approximate STAS. 274+85, 406+10, 436+41, 529+00 and 582+30. Other 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. The random debris at approximate Westbound STA. 395+10 and any other locations specified by the Engineer shall be removed with the project. Payment for the removal of this debris and any other debris to be removed, as directed by the Engineer, will be considered incidental to the contract.
6. The existing wedge curb will be removed from EB STA. 276+95 to STA. 279+95 and at any other locations as directed by the Engineer. The bid item "Remove Curb" will be considered full compensation for the removal and disposal of all curb regardless of the type and material make-up.

7. All damaged signs on the project shall be replaced with this project. The following signs shall be replaced:
 - a. Eastbound "Exit 16" sign at approximate Sta. 424+40 (SBM Aluminum Panel Sign (5' W X 7' H) mounted on existing posts).
 - b. Eastbound "Exit 17B" sign at approximate Sta. 578+34 (0.125 In. Aluminum Sheet Sign (7.5' W X 5' H) with (2) 2-1/2" 10 ga. Type 1 posts with Type D breakaway supports).
 - c. Eastbound "Exit 18" sign at approximate Sta. 602+39 (SBM Aluminum Panel Sign (5' W X 7' H) mounted on existing posts).
 - d. Eastbound "Exit 18A" sign at approximate Sta. 609+52 (0.125 In. Aluminum Sheet Sign (7.5' W X 5' H) with (2) 2-1/2" 10 ga. Type 1 posts with Type D breakaway supports). This sign is to be relocated as directed by the Engineer.
 - e. Westbound "Exit 16" sign at approximate Sta. 448+38 (SBM Aluminum Panel Sign (5' W X 7' H) mounted on existing posts).

Any other damaged or missing signs shall be replaced as directed by the Engineer. Per Section 715 of the 2008 Edition of the Standard Specifications for Road and Bridge Construction., payment for sign replacement will be made by "square feet" of "SBM Aluminum Sheet Signs" or "SBM Aluminum Panel Signs" and shall include all materials, labor and equipment necessary to complete the installation of the new signs unless otherwise noted in this proposal or directed by the Engineer. Removal of the existing signs panels will be considered incidental to bid items to construct new signs.

8. The Eastbound "Exit 18B" sign at approximate Sta. 620+90 has been damaged. The right post has been hit and detached from the breakaway sign base. The contractor shall reattach the sign post to the base as directed by the Engineer. Payment for this work will be considered incidental to the contract bid price for "signs".
9. All "green" milepost signs (M.P. 13 to M.P. 18) shall be replaced with this project. Payment for these signs will be made by "each" for the bid item "Steel Milepost Marker". The blue 2/10th mile marker signs, in the median, on the project are not to be disturbed. The contractor will be responsible for the replacement of these signs if damaged during construction.
10. A quantity of Granular Embankment and Geotextile Fabric Type IV has been included to treat the open sinkholes Lt. Sta. 602+60 & Sta. 621+00. The sinkhole treatment shall be coordinated as directed or approved by the Engineer. Any additional items of work will be considered incidental to "Granular Embankment" and "Geotextile Fabric Type IV".

11. The 54" headwall Rt. Approx. WB exit ramp to EB Taylorsville (WB Exit 17B) Sta. 209+00 has a 4" Non-Perforated pipe exposed along the side of the wing wall that is causing erosion at inlet of the headwall. The exposed pipe is to be connected to the wing wall through the existing cored hole location in the wing wall as directed by the Engineer. Payment for this work shall be paid for by "each" for the bid item "Cored Hole Drainage Connection To Headwall" and will include all materials, labor and equipment necessary to excavate along the wing wall, complete any additional coring necessary, installing the pipe into the cored hole, grouting around the pipe in the wing wall and backfilling around the wing wall as directed by the Engineer. Any and all other miscellaneous items, such as fittings, that are necessary to complete the work shall be incidental to this item of work. No additional payment will be made for these items.
12. A quantity of "Shouldering" has been included to clear road debris from shoulder edges to allow water to sheet flow over the shoulder. Payment for this work shall be by "linear foot" of the bid item "Shouldering". Payment for this work shall include all materials, labor and equipment necessary to remove all foreign debris from the shoulders and reshape the shoulders to "normal" condition as directed by the Engineer. Removing guardrail, DGA, Emulsified Asphalt RS-2, and Asphalt Seal Aggregate will be paid separately from this item of work. Any other items of work necessary to complete this item of work as directed by the Engineer will be considered incidental to "Shouldering".
13. Several areas throughout the project have fill slopes that are beginning to fail or slip due to poor drainage. These areas shall be ditched as directed by the Engineer. The degrading slopes shall be regraded and dressed as directed by the Engineer. Payment for this work will be measured by linear foot of "ditching", cubic yard of "embankment" and square yard of "erosion control blanket". Some specific locations include Lt. Sta. 573+75 to Sta. 574+50 and Lt. Sta. 359+00 to Sta. 361+00.
14. Several posts along the 4 foot chain link fences Lt. Sta. 283+00 to Sta. 284+27 and Lt. Sta. 287+15 to Sta. 292+75 have been damaged. The contractor shall remove and replace these posts and any others throughout the project, as directed by the Engineer. Payment will be paid by "each" for the bid item "Remove and Replace Fence Post". Payment for this work shall include all materials, labor and equipment necessary to complete this work as directed by the Engineer. Retying the existing chain link fence back to these posts and any other locations that the fence is not properly connected to the fence posts, throughout the project, as directed by the Engineer will be considered incidental to "Remove and Replace Fence Post".

15. The westbound shoulder barrier wall at approx. Sta. 284+20 is broken and allows drainage from the bridge to escape. This segment of barrier wall is to be removed and replaced as directed by the Engineer. The existing wall segment contains a lighting junction box as well as a 2" galvanized conduit and two (2) number eight (#8) wires that will also be replaced with this barrier wall. A quantity for each of these items has been included to complete these items of work as directed by the Engineer. Any miscellaneous fittings required for the proper connection of the new conduit and wires will be considered incidental to the bid price for the wire and conduit. A new double drop box inlet (13S) shall also be installed in the shoulder, at this location, as directed by the Engineer.
16. The "Lane 4" pavement replacement Eastbound at approximate Sta. 432+25 is adjacent to an existing manhole. The pavement replacement will require reinforced concrete pavement and forming around the manhole prior to concrete placement. This work will be considered incidental to the bid item "JPC Pavement - 11"-24 HR". No additional payment will be allowed for this work.
17. Several locations on the project have significant erosion under the existing pavement or other structures. Some specific locations are at the west end of the eastbound shoulder barrier at approximately Sta. 275+50 and the northwest corner of the bridge over Curtis Avenue and the railroad at approximately Sta. 284+25. These and any other areas with similar erosion issues shall be filled with "flowable fill" as directed by the Engineer. Payment for this work shall be per cubic yard of "flowable fill". An approximate quantity has been set up for this project, but payment will be based on quantities measured by the field Engineer.
18. Guardrail, End Treatments, and Terminal Sections to be replaced are listed by station numbers. Exact placement to be approved by the Engineer on construction.
19. The drainage summary lists locations where the existing grates have been dislodged from their proper position. The contractor will be required to "re-set" the existing grates. "Resetting Grates" will be considered incidental to the bid item "Ditching". Grates that have been damaged and will need to be replaced will be paid for under the bid item "Replace Grate" and will be paid for by "each".
20. Removed guardrail shall be delivered to the Bailey Bridge Yard in Frankfort and shall be coordinated with the Resident Engineer. A form has been developed and included in the proposal for verification of the components delivered.
21. Delineators shall meet the requirements of Section 830 and 838 of the Standard Specifications.
22. Delineators shall be placed in accordance with Section 3D of the M.U.T.C.D.
23. Existing pavement markers in the mainline concrete will be removed. A partial depth patch will be paid for to repair the pavement at the removal locations.

24. The existing edge drain system is to be preserved. Care should be taken when the deteriorated concrete is removed and replaced. Additionally, there is a small quantity of perforated pipe, non-perforated pipe and pipe headwalls set-up to be used at the engineer's discretion. Payment will be based on the actual quantities measured in the field by the Engineer.
25. DGA, flowable fill, crushed aggregate No. 2 and geotextile fabric used to back the proposed perforated and non-perforated pipe trench will be incidental to the price of the 4" perforated and 4" non-perforated pipe and no additional pay will be permitted.
26. Non-perforated pipe will be backfilled with flowable fill. Backfill of the non-perforated pipe with flowable fill will be incidental to the bid item "Non-perforated Pipe — 4 Inch".
27. All pipe connections in the edge drain system will be rigid.
28. Edge drains damaged during placement of additional outlets will be replaced at the contractor's expense.
29. A quantity of Channel Lining Class II has been included to be applied to eroded areas around the drainage outlets and for some of the areas that will need to be ditched. The Engineer will make the determination whether a ditch receives ditching and/or channel lining. Geotextile Fabric Type I will not be measured for payment, but will be considered incidental to the bid item "Channel Lining Class II".
30. Any delineator posts or roadway signs that are damaged during construction are to be replaced at the contractor's expense.
31. The cleaning of existing pipe culvert inlets and outlets 36 inches or less in diameter are incidental to the bid item for "Ditching" in accordance with Section 209.03.01 of the 2008 Edition of the Standard Specifications for Road and Bridge Construction. There is a list of locations that have been identified to be cleaned. This list may not be complete and therefore there may be additional outlets which require cleaning. The Engineer will determine any additional outlets to be cleaned.
32. The ramp gore striping for the westbound entrance ramp from Poplar Level Road will be modified with this project. The gore striping length will be reduced approximately 340 feet (See Exhibit 15) from approximately Station 296+90 to approximately Station 300+30 as directed by the Engineer. The new gore striping terminus will have four (4) feet of separation, center of stripe to center of stripe, between the stripes. A similar striping revision is to be made at the westbound I-264 entrance ramp from eastbound I-64 (See Exhibit 16). No other striping changes are to be made on the project unless otherwise directed by the Engineer.
33. The specified completion date for this project is May 1, 2010. Contrary to section 108, liquidated damages will be charged during the months of December through March.

**TRAFFIC CONTROL PLAN
DIAMOND GRINDING REHABILITATION
JEFFERSON COUNTY
I-264 WATTERSON EXPRESSWAY
ARRA 264-1(164)
FD52 056 0264 012-019
Item Nos. 5-2045.00 & 5-2047.00**

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

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the 2008 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 45 miles per hour 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.

Night work is required 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 and hours:

September 4-7, 2009	Labor Day Weekend
November 26-29, 2009	Thanksgiving Weekend
December 23-27, 2009	Christmas Weekend
December 31, 2009-January 1, 2010	New Years Weekend
April 2-4, 2010	Easter Weekend
April 23 - May 2, 2010	Derby Week
May 28-31, 2010	Memorial Day Weekend
July 2-4, 2010	Independence Day Weekend
6:00 a.m. to 8:00 p.m.	Monday – Friday

Traffic may be reduced to three lanes in each direction all other times.

Traffic may be reduced to two lanes in each direction during following days and hours:

10:00 p.m. to 6:00 a.m.	Monday – Friday
10:00 p.m. Saturday to 6:00 a.m. Monday	
10:00 p.m. Friday to 6:00 a.m. Monday (Max. 3 weekends each direction)	

Use only one lane closure in each direction of travel at the same time during the daylight hours specified. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. 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 Level & 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 existing striping by water blasting. Remove edge lines throughout the project as directed and/or approved by the Engineer. Paint temporary edge lines through the lane closure.

Approximate full depth 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, work continuously within the parameters outlined above to complete the work and eliminate the “hole”. Place Type III Barricades immediately in front of pavement removal areas until the new JPC Pavement achieves 3000PSI compressive strength. Payment for Type III Barricades will be considered incidental to the bid item “Maintain and Control Traffic”.

Once pavement removal at a site has begun, full depth replacement must be completed within the time a lane closure is allowed.

Access to all ramps at all interchanges on the project shall be maintained at all times unless otherwise noted or directed by the Engineer.

Note that Lane shifts are required throughout the project. See the Exhibits for lane locations and widths. Stripe according to the MUTCD.

During the days and hours when a lane closure is allowed, implement the following procedures: Maintain traffic as specified in the phasing notes. Maintain at least 6 feet of lateral clearance between the traveled lanes and any drop off resulting from pavement removal. Also, any joint sealing or sawing operations requiring workers or equipment to be within the required 6 feet of lateral clearance will be done during the hours when traffic is restricted to two lanes. Any other work not requiring traffic lane widths to be restricted due to barrels or equipment encroaching into the interior lanes can be done during the remaining hours when three 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. Once pavement removal at a site has begun, full depth replacement must be completed within the time a lane closure is allowed.

SHOULDER PREPARATION AND RESTORATION

Prior to placing any lane closures that require shifting traffic onto existing shoulders, patch and remove any foreign debris on the shoulders as directed by the Engineer. Bolt 1 ½ inch thick steel plates the length of the entire "draw down" area of the inlet box to all inlet boxes that are to be under or adjacent to traffic on the inside shoulder or as directed by the Engineer. Ensure there are ample openings in the steel plate where it covers the inlet grate to allow water to enter the grate. Removal of failed materials and additional patching shall be performed by the Contractor as directed by the Engineer during the time the shoulder is used as a travel lane. DGA will be paid at the Contract unit bid prices; all other shoulder preparation, maintenance, steel plates, and restoration shall be incidental to other items of work.

PHASE I – SHOULDER BARRIER AND DRAINAGE CONSTRUCTION ON THE OUTSIDE SHOULDERS

Use shoulder closures to complete the proposed barrier wall construction Eastbound Sta. 276+95 to Sta. 279+95, the proposed curb and drainage work on the southeast corner of the bridge over Taylorsville Road, the proposed barrier wall and drainage work at Westbound Sta. 284+20 and at Westbound Sta. 277+00. Replace and/or construct specified Guardrail, Guardrail End Treatments, perform Partial Depth Repairs, perform shouldering where necessary, perform Ditching and repair Erosion Areas as directed by the Engineer. This work is to be completed prior to shifting any traffic to the outside shoulders. Phase I work may be performed simultaneously with Phases II & III as directed and/or approved by the Engineer.

PHASE II - JPC PAVEMENT REMOVAL AND REPLACEMENT, OUTSIDE LANE(S) AND OUTSIDE SHOULDER

Move the traffic to the inside lanes (Lanes 1 & 2) and inside shoulder (see Figure 1) during removal and construction of the outside lane(s) (4-6) and shoulder repair areas as directed by the Engineer. Remove the JPC pavement, prepare the subbase if necessary and pour the new JPC Pavement 11". Remove all existing Type V pavement markers in the specified lanes and patch the residual hole for each marker. Complete any other miscellaneous patching in the specified lanes as directed by the Engineer. All work should be completed during the time allotted.

During the allotted nighttime hours, the third lane from the inside (Lane 3) may be repaired (see Figure 2). Repair specified Expansion Dams at bridge ends. Finish before traffic is opened to three lanes the next day.

Ramp repairs and patches may also be performed, during this phase, as directed by the Engineer. One ramp closure at a time will be allowed per weekend during this phase. Access to all other ramps at interchanges within the project shall be maintained at all times.

Phase II work can be performed simultaneously with Phases I & III as directed and/or approved by the Engineer.

PHASE III - JPC PAVEMENT REMOVAL AND REPLACEMENT, LANE NO. 3

Move two lanes of traffic to the inside lane (Lane 1) and inside shoulder (see Figure 2) during removal and construction of the third lane from the inside (Lane 3) repair areas as directed by the Engineer. Remove the JPC pavement, prepare the subbase if necessary, pour the new JPC Pavement 11". Remove all existing Type V pavement markers in the specified lane and patch the residual hole for each marker. Complete any other miscellaneous patching in the specified lane as directed by the Engineer. All work should be completed during the time allotted unless otherwise directed by the Engineer.

Ramp repairs and patches may also be performed, during this phase, as directed by the Engineer. One ramp closure at a time will be allowed per weekend during this phase. Access to all other ramps at interchanges within the project shall be maintained at all times.

Work for Phases I – III must be completed prior to shifting traffic to the Phase IV pattern.

PHASE IV - JPC PAVEMENT REMOVAL AND REPLACEMENT, LANE NO. 1

Move the traffic to the outside lanes (Lanes 3-6) and outside shoulder (see Figure 3) during removal and construction of the inside lane (Lane 1) and shoulder repair areas as directed by the Engineer. Remove the JPC pavement, prepare the subbase if necessary and pour the new JPC Pavement 11". Remove all existing Type V pavement markers in the specified lane and patch the residual hole for each marker. Complete any other miscellaneous patching in the specified lane as directed by the Engineer. All work should be completed during the time allotted.

During the allotted nighttime hours, any remaining repairs to the second lane from the inside (Lane 2) may be repaired (see Figure 4). Repair specified Expansion Dams at bridge ends. Finish before traffic is opened to three lanes the next day.

Access to all ramps at interchanges within the project shall be maintained at all times during this phase.

PHASE V - JPC PAVEMENT REMOVAL AND REPLACEMENT, LANE NO. 2

Move two lanes of traffic to the outside lanes (Lanes 4-6) and outside shoulder (see Figure 4) during removal and construction of the second lane from the inside (Lane 2) repair areas as directed by the Engineer. Remove the JPC pavement, prepare the subbase if necessary, pour the new JPC Pavement 11". Remove all existing Type V pavement markers in the specified lane and patch the residual hole for each marker. Complete any other miscellaneous patching in the specified lane as directed by the Engineer. All work should be completed during the time allotted unless otherwise directed by the Engineer.

Access to all ramps at interchanges within the project shall be maintained at all times during this phase.

PHASE VI – COMPLETE FULL DEPTH AND PARTIAL DEPTH PATCHES

Any remaining full depth and partial depth patches may now be completed throughout the limits of the project using appropriate lane configurations as directed and/or approved by the Engineer.

PHASE VII – DIAMOND GRIND

Diamond Grind the JPC Pavement the full lane width when strength is achieved using appropriate lane configurations as directed by the Engineer. Close one lane, in the direction of work only, using drums and flashing arrows in accordance with the Standard Drawings and these notes. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. 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. Limit the length of the lane closure to no more than can be completed during the specified time period.

PHASE VIII – SAW AND SEAL JOINTS

Saw and seal the concrete pavement. Seal the joints between the mainline driving lanes and shoulders using appropriate lane configurations as directed by the Engineer. Close one lane, in the direction of work only, using drums and flashing arrows in accordance with the Standard Drawings and these notes. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. 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 IX – TRAFFIC COUNTING INDUCTANCE LOOPS

After diamond grinding, joint sealing and guardrail operations are completed install traffic counting inductance loops. Close one lane, in the direction of work only, using drums and flashing arrows in accordance with the Standard Drawings and these notes. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. 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 X – PERMANENT STRIPING

After all other work is completed, place permanent striping. Mobile operations may be utilized. In addition to diamond ground areas, place permanent striping on bridge decks and ramp gore areas 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 one and one-half 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.

RAMP CLOSURES

The following ramps will need to be closed to complete the proposed full depth repairs on the respective ramp:

- Eastbound exit ramp to Newburg Road.
- Eastbound exit ramp to Southbound Breckenridge Lane
- Eastbound exit ramp to Northbound Breckenridge Lane
- Eastbound entrance ramp from Southbound Breckenridge Lane
- Eastbound entrance ramp from Northbound Breckenridge Lane
- Westbound exit ramp to Southbound Newburg Road.
- Westbound exit ramp to Eastbound Taylorsville Road.
- Westbound exit ramp to Southbound Breckenridge Lane
- Westbound entrance ramp from Breckenridge Lane

Only one ramp closure will be allowed at any one time throughout the project. Ramp closures shall be completed on weekends during times of exterior lane closures on the mainline. Each ramp may only be closed for one weekend. Once pavement removal at a ramp site has begun, all full depth replacements for that particular ramp must be completed and restriped within the time a ramp closure is allowed. 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 the beyond the specified time a ramp closure is permitted. Detours signing plan exhibits are attached for each ramp closure. The sign locations shown on the exhibits are approximate. The location and type of sign used shall be as directed or approved by the Engineer prior to any ramp closure. All messages to be used on Variable Message Signs shall be approved by the Engineer prior to any ramp or lane closure.

Contrary to section 112, ramp/lane closures will **NOT** be measured for payment, but are considered incidental to Maintain and Control Traffic.

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 MILES, LEFT/RIGHT LANE CLOSED 3 MILES, 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 detours, lane shifts, "Roadwork Ahead" signs on entrance ramps, and extra Double Fine signs and Speed Limit signs between interchanges to be paid only once no matter how many times they are moved or relocated.

FLASHING ARROWS

Flashing arrows will be paid for once, no matter how many times they are moved or relocated.

VARIABLE MESSAGE SIGNS

Provide variable message signs 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 variable message signs. Place variable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens relocate or provide additional variable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The locations designated may vary as the work progresses. The messages required to be provided will be designated by the Engineer. The variable message signs will be in operation at all times. In the event of damage or mechanical/electrical failure, the Contractor will repair or replace the Variable Message Sign immediately. Variable Message Boards 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 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 will be approved by the Engineer. Truck Mounted Attenuators will not be measured for payment, but are incidental to Maintain and Control Traffic. 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".

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

1. Temporary and permanent striping will be 6" in width; and
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"; and
3. Edge lines will be required for temporary striping; and
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 Type 1 Tape.

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.

It may be necessary to saw or excavate small areas in an adjacent lane to allow room for forms to pour a new slab to the proper grade. Any hole will be filled temporarily with DGA when adjacent to traffic or there exists a possibility that a vehicle may drop a wheel into the hole.

TRAFFIC COORDINATOR

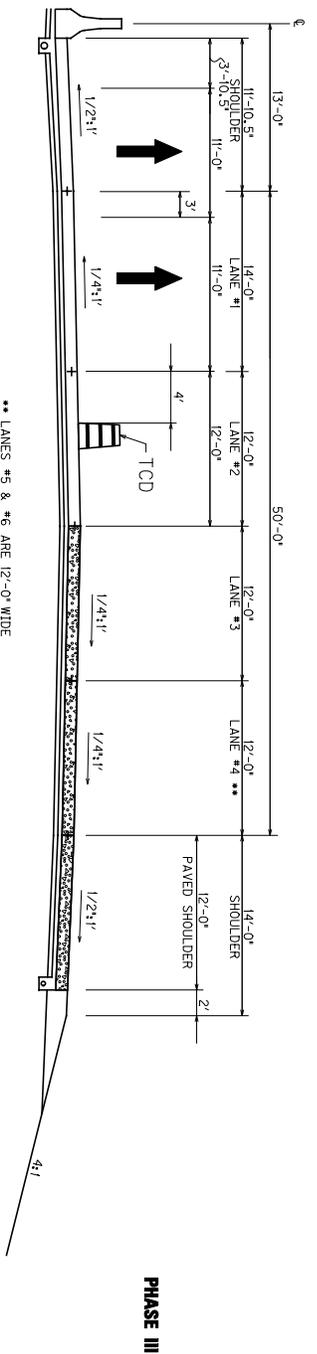
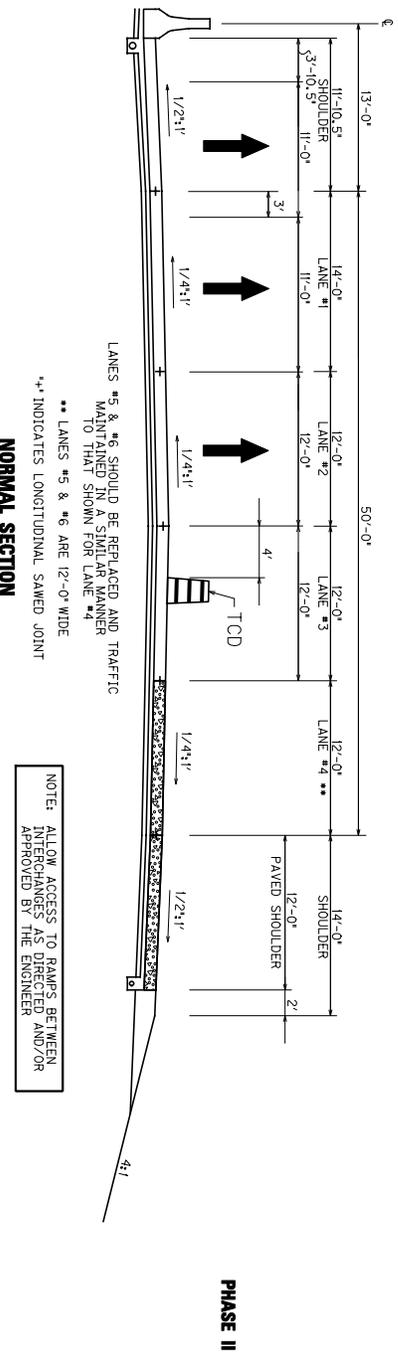
Designate an employee to be traffic coordinator. The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the 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 variable 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.

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS I-264 WATTERSON EXPRESSWAY



JEFFERSON COUNTY
ARRA 264-1(164)

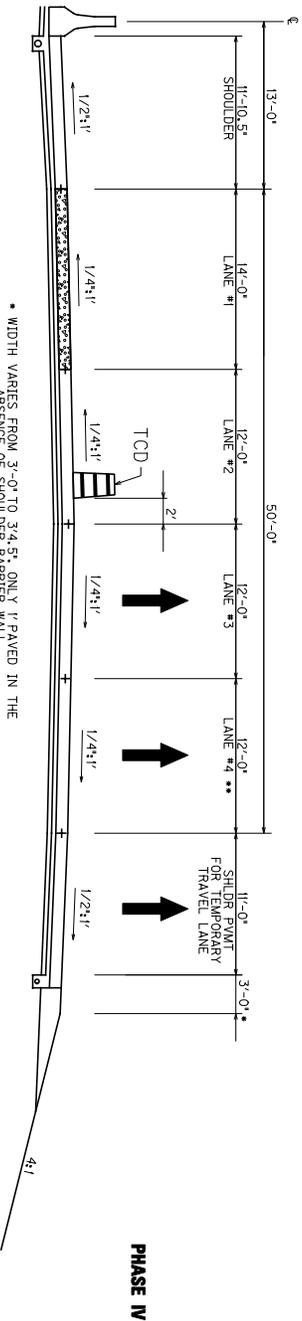
8.0" BASE
4" DENSE GRADE AGGREGATE
4" DRAINAGE BLANKET - TY II ASPHALT
1" PCC PAVEMENT, NON-REINFORCED

I-264 EXISTING
MAINLINE
PAVEMENT STRUCTURE

**I-264 WATTERSON EXPRESSWAY
MOT TYPICAL SECTIONS**

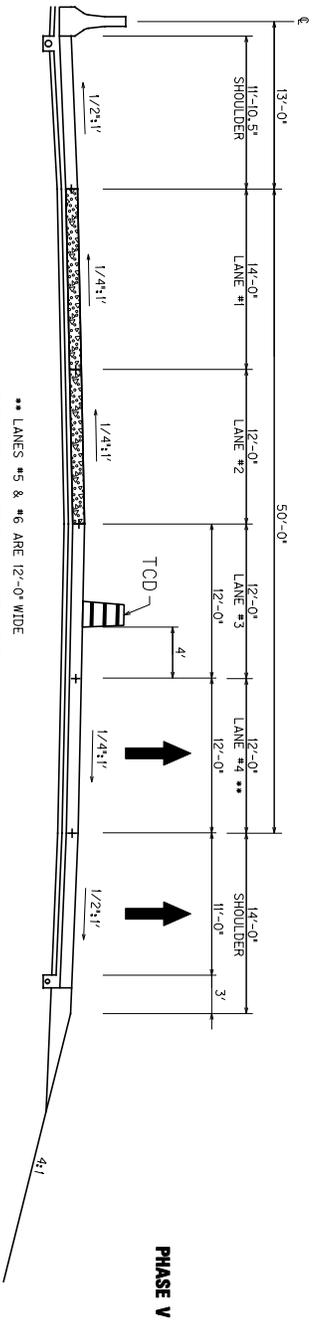
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS I-264 WATTERSON EXPRESSWAY

NTS



* WIDTH VARIES FROM 3'-0" TO 3'-4.5", ONLY 1' PAVED IN THE
ABSENCE OF SHOULDER BARRIER WALL
** LANES #5 & #6 ARE 12'-0" WIDE
** INDICATES LONGITUDINAL SAWED JOINT

**NORMAL SECTION
LANE #1
FULL-DEPTH
PAVEMENT REPAIRS
FIGURE 3**



** LANES #5 & #6 ARE 12'-0" WIDE
** INDICATES LONGITUDINAL SAWED JOINT

**NORMAL SECTION
LANE #1 AND LANE #2
FULL-DEPTH
PAVEMENT REPAIRS
FIGURE 4**

8.0" BASE
4" DRAINAGE BLANKET - TY II ASPHALT
4" DENSE GRADE AGGREGATE
PCC PAVEMENT, NON-REINFORCED
3" SURFACE

I-264 EXISTING
MAINLINE
PAVEMENT STRUCTURE

FULL-DEPTH PAVEMENT REPAIR

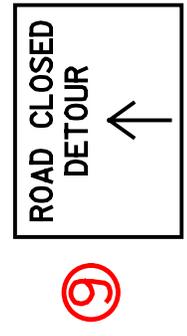
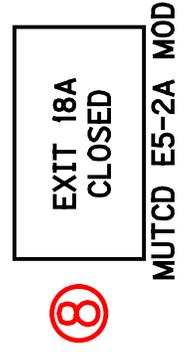
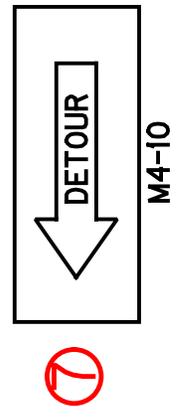
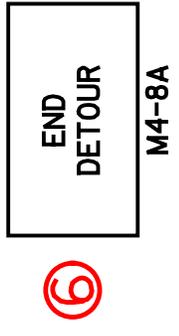
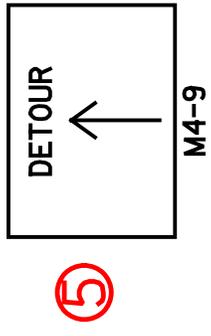
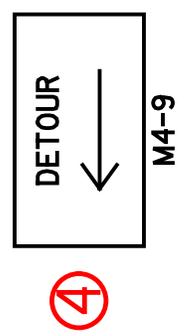
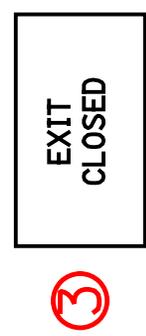
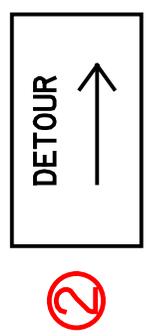
**I-264 WATTERSON EXPRESSWAY
TYPICAL SECTIONS
3-LANE M.O.T. SCHEMATIC**

DETOUR SIGNS KEY

EXHIBIT
NO. 5

VARIABLE MESSAGE SIGNS

- 1a EXIT @ 17A
- 1b USE 64 TO CANNONS LN. AS DETOUR OPTION
- 1c AS DIRECTED BY ENGINEER
- 1d AS DIRECTED BY ENGINEER

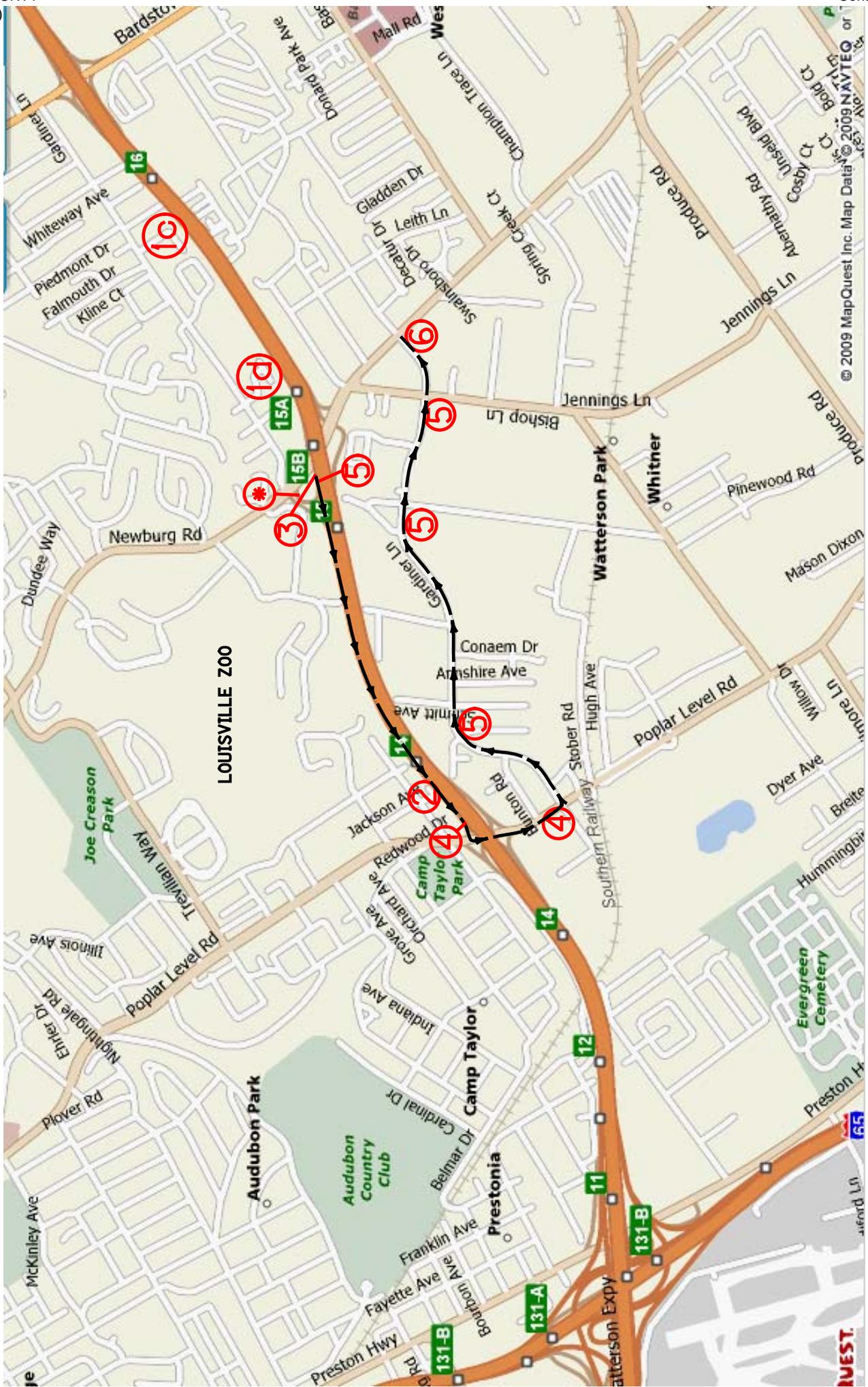


* DENOTES RAMP CLOSURE

ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

**EXHIBIT
NO. 6**

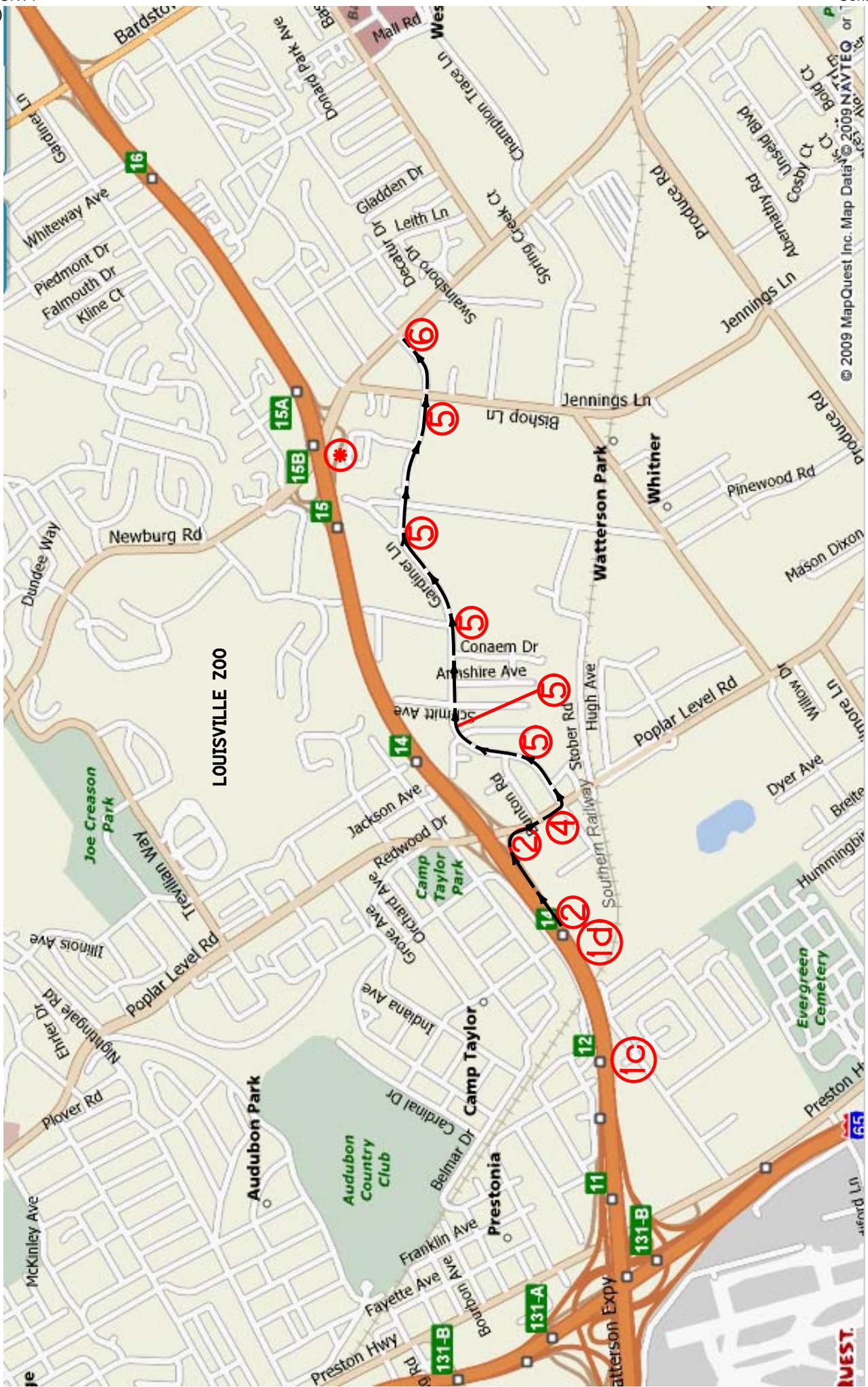
DETOUR SIGNING PLAN FOR I-264 WB EXIT RAMP TO SB NEWBURG



ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

**EXHIBIT
NO. 7**

DETOUR SIGNING PLAN FOR I-264 EB EXIT RAMP TO NEWBURG



ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

**EXHIBIT
NO. 9**

DETOUR SIGNING PLAN FOR I-264 EB EXIT TO NB BRECKINRIDGE



ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

**EXHIBIT
NO. 10**

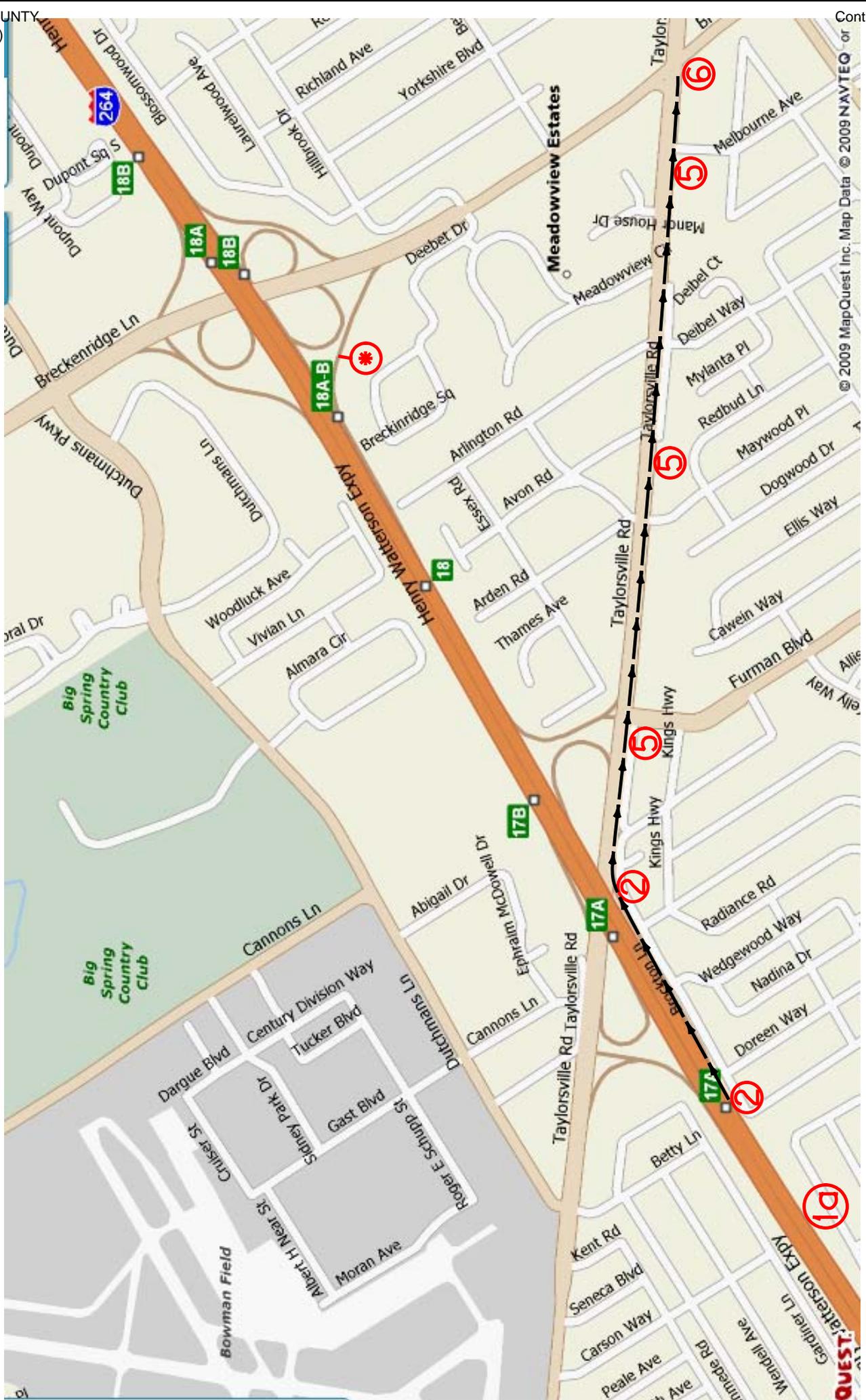
DETOUR SIGNING PLAN FOR I-264 EB ENTRANCE RAMP FROM SB BRECKENRIDGE



ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

**EXHIBIT
NO. 12**

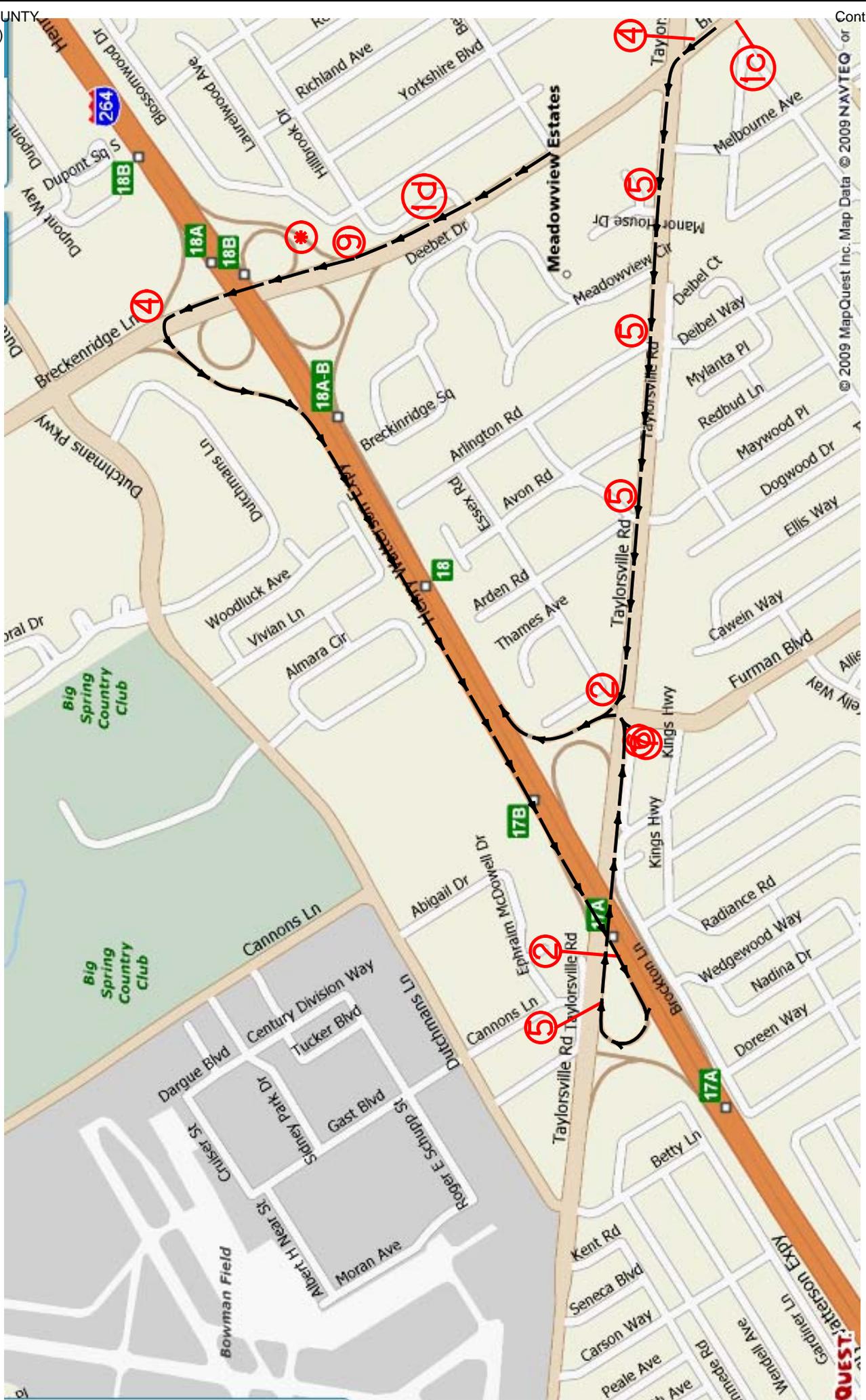
DETOUR SIGNING PLAN FOR I-264 EB EXIT TO SB BRECKENRIDGE



ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

EXHIBIT
NO. 13

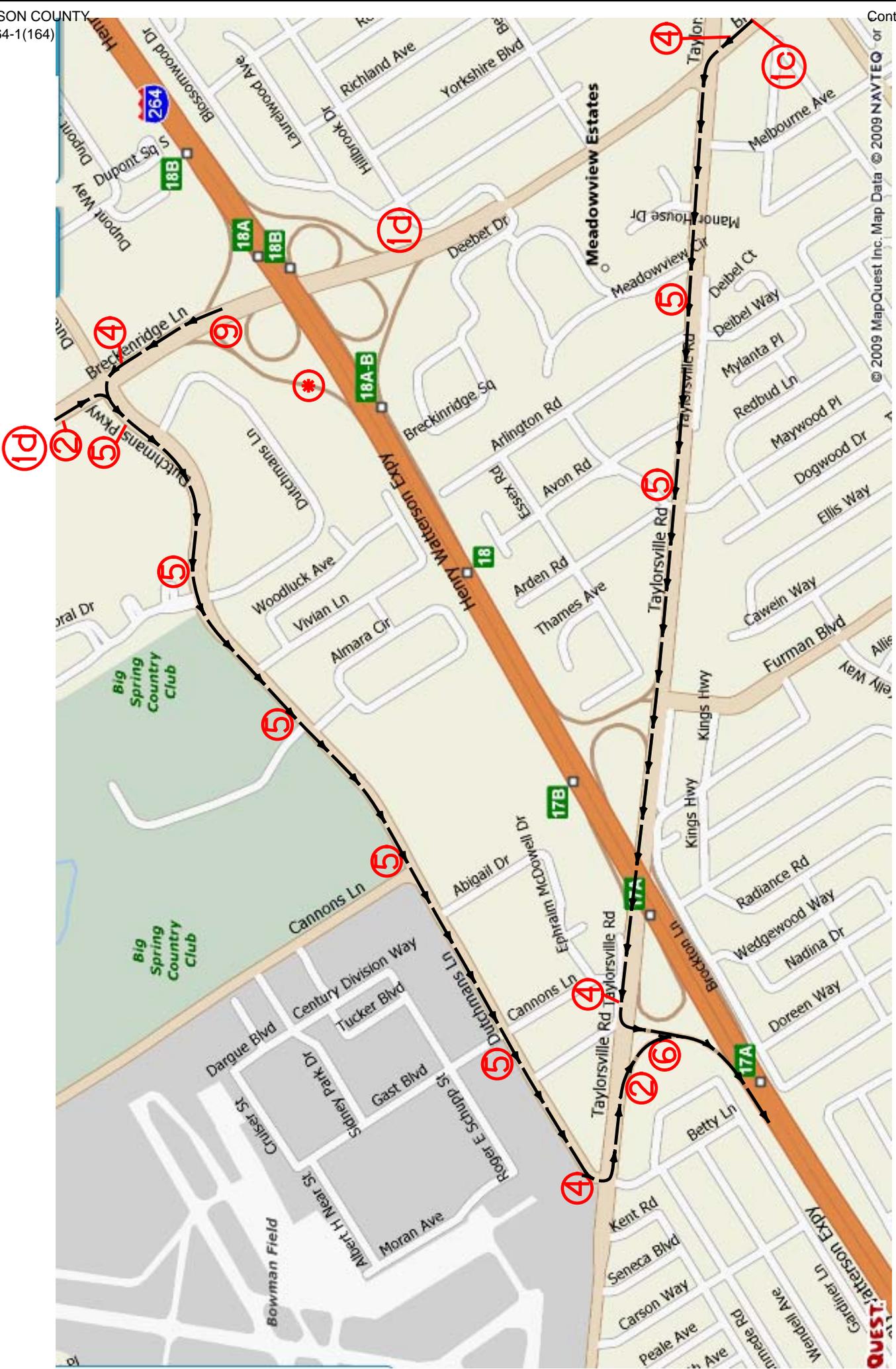
DETOUR SIGNING PLAN FOR I-264 EB ENTRANCE RAMP TO NB BRECKENRIDGE



ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

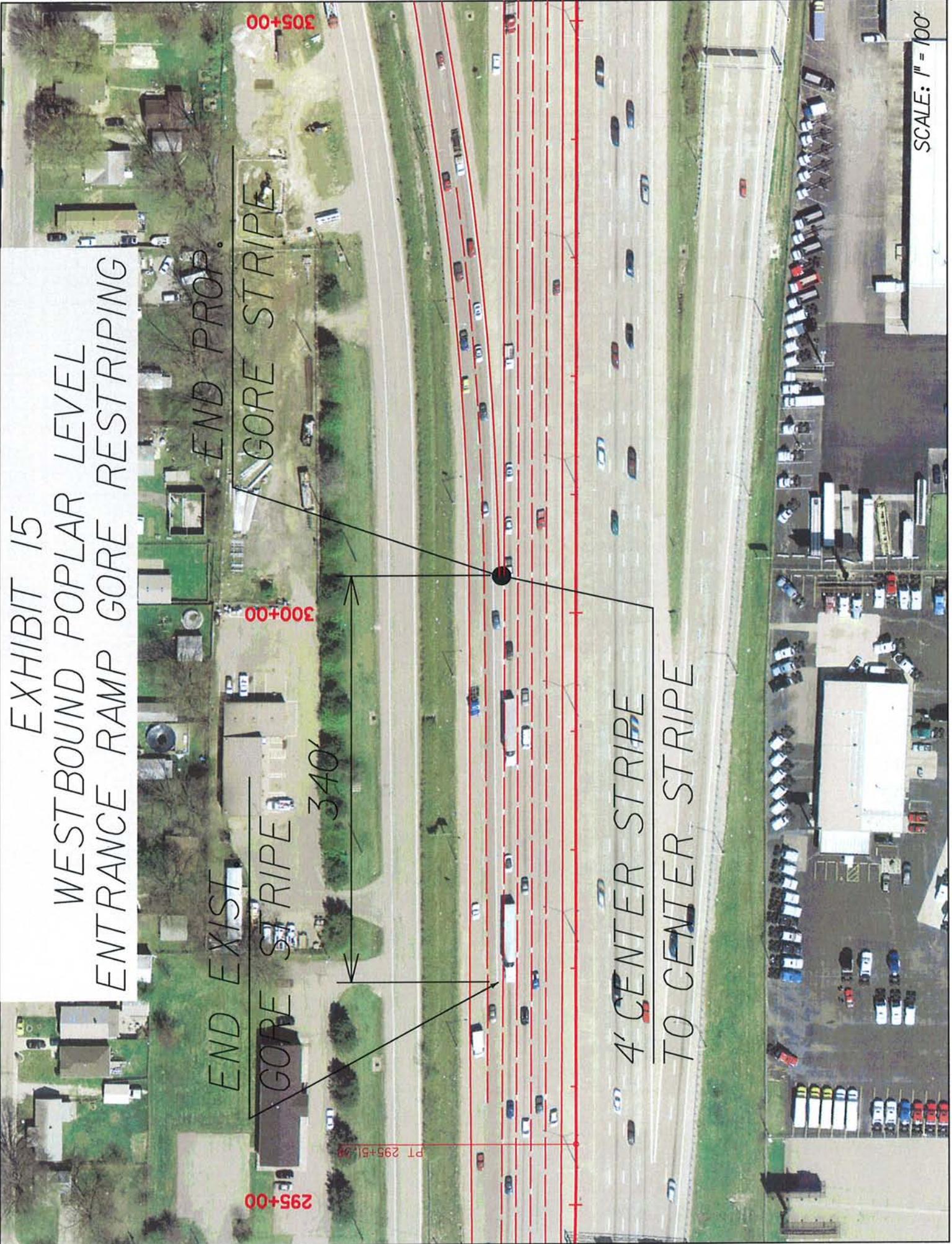
EXHIBIT
NO. 14

DETOUR SIGNING PLAN FOR I-264 WB ENTRANCE RAMP FROM BRECKINRIDGE



ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

EXHIBIT 15
WESTBOUND POPLAR LEVEL
ENTRANCE RAMP GORE RESTRIPING



END PROP.
GORE STRIPE

305+00

300+00

END EXIST
GORE STRIPE

340'

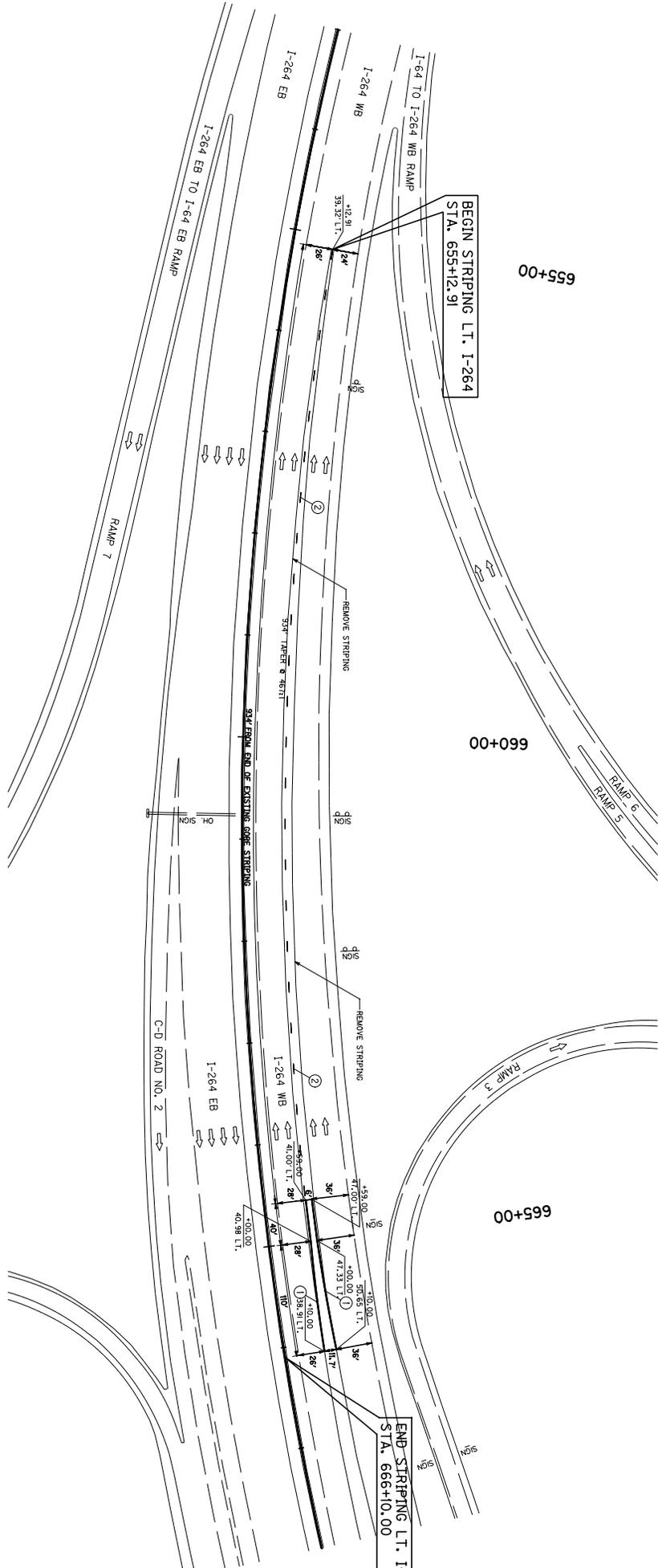
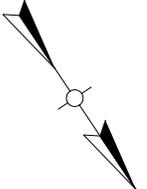
295+00

PT 295+51.24

4' CENTER STRIPE
TO CENTER STRIPE

SCALE: 1" = 100'

EXHIBIT 16



SHEET STRIPING QUANTITIES			
BID CODE	DESCRIPTION	UNIT	QUANTITY
06557	PAVE STRIPING-DUR TY I-6 IN Y	LN FT	233
06560	PAVE STRIPING-DUR TY I-12 IN W	LN FT	306

SHEET PAVEMENT MARKER QUANTITIES			
BID CODE	DESCRIPTION	UNIT	QUANTITY
06592	PAVEMENT MARKER TYPE V-B W/R	EACH	28

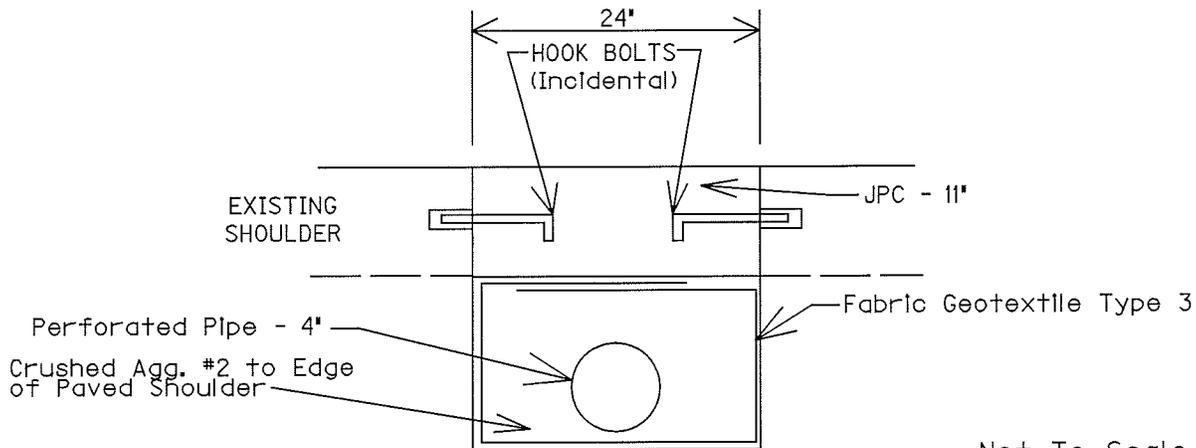
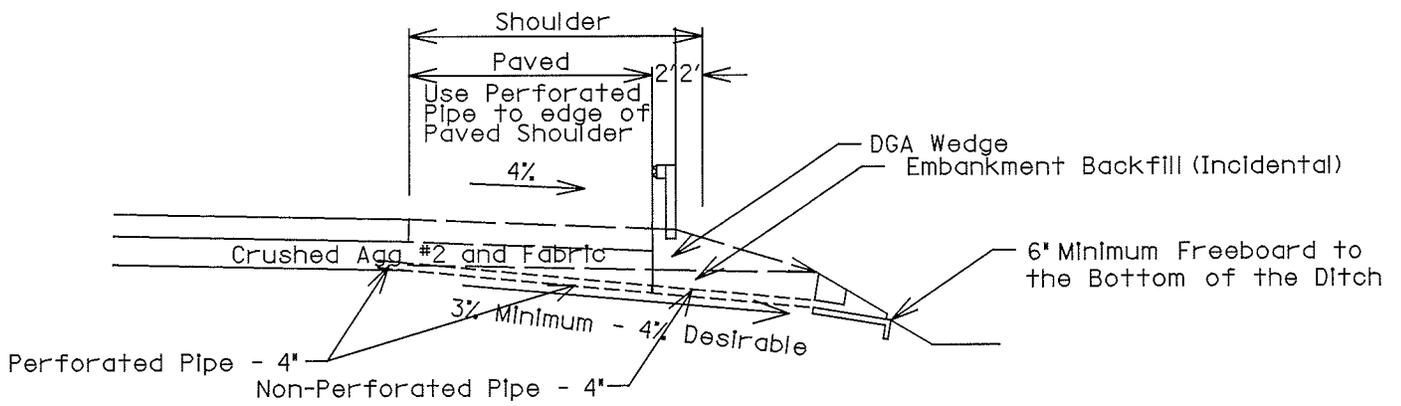


- NOTES:**
1. PAVEMENT STRIPING - DURABLE TYPE I - 12 INCH WHITE
 2. PAVEMENT STRIPING - DURABLE TYPE I - 6 INCH BROKEN WHITE (10' LENGTH, 30' GAP)
 3. LANE WIDTHS ARE 12' UNLESS OTHERWISE NOTED.
 4. SEE STANDARD DRAWING NO. TPA-130-01 FOR PAVEMENT MARKER ARRANGEMENT.

SCALE: 1"=50'

PERMANENT STRIPING PLAN
I-264 WESTBOUND

COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-2045.00 5-2047.00	



Not To Scale

PERFORATED PIPE DRAIN OUTLET

I-264

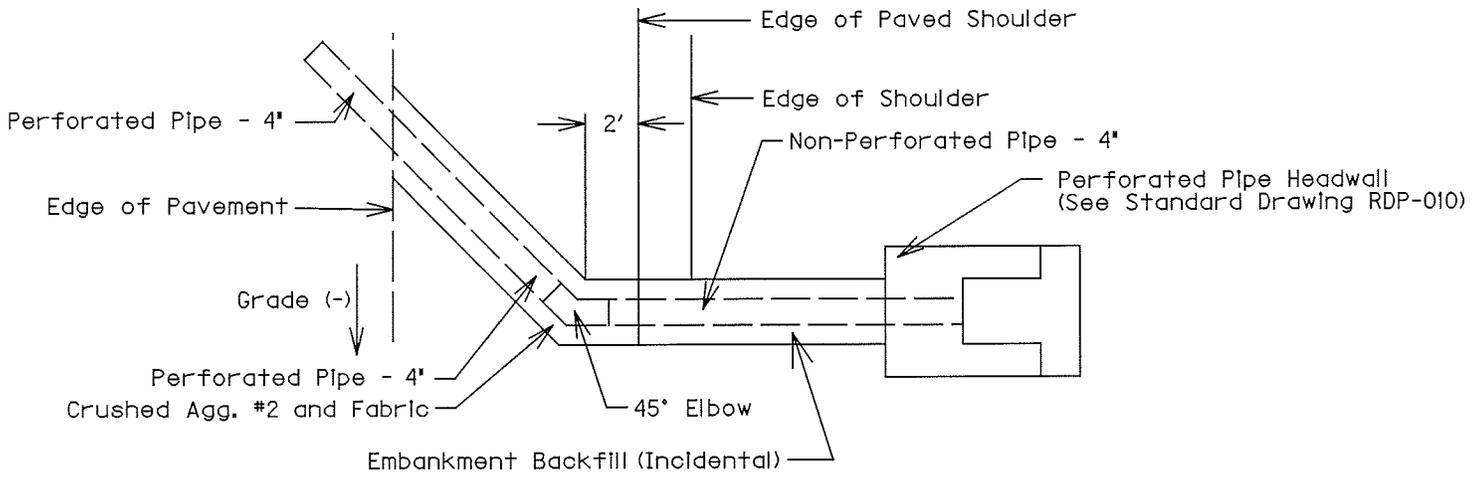
ITEM NOS 5-2045.00 & 5-2047.00

JEFFERSON COUNTY

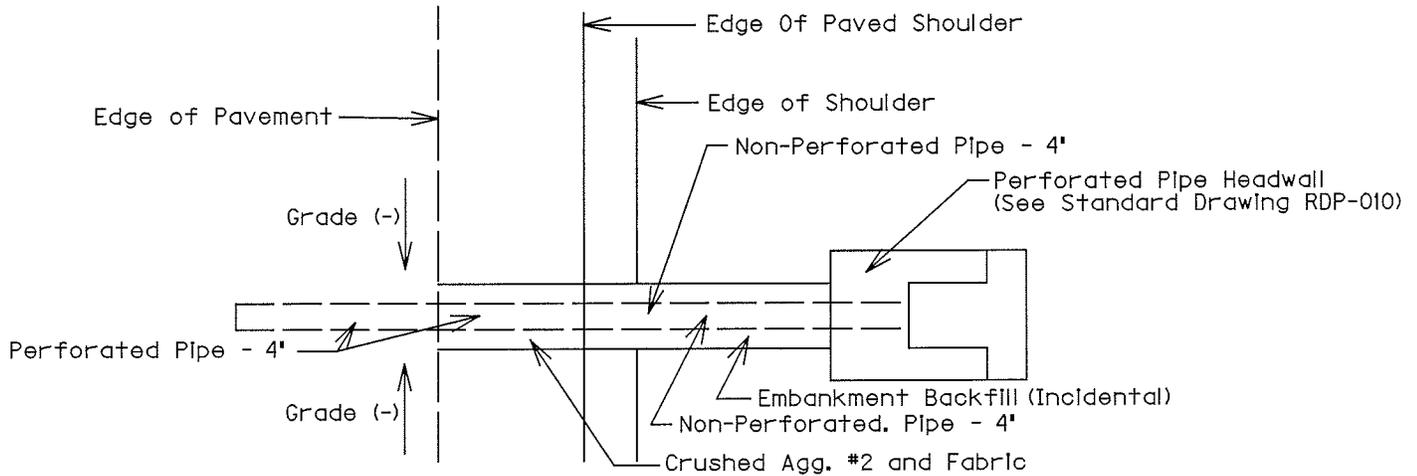
FD52 056 0264 012-019

ARRA 264 - 1(164)

USE ON GRADES



USE IN SAGS



Not To Scale

PERFORATED PIPE OUTLET AND HEADWALL

*NOTE : EMBANKMENT BACKFILL IS INCIDENTAL TO NON-PERFORATED PIPE

I-264

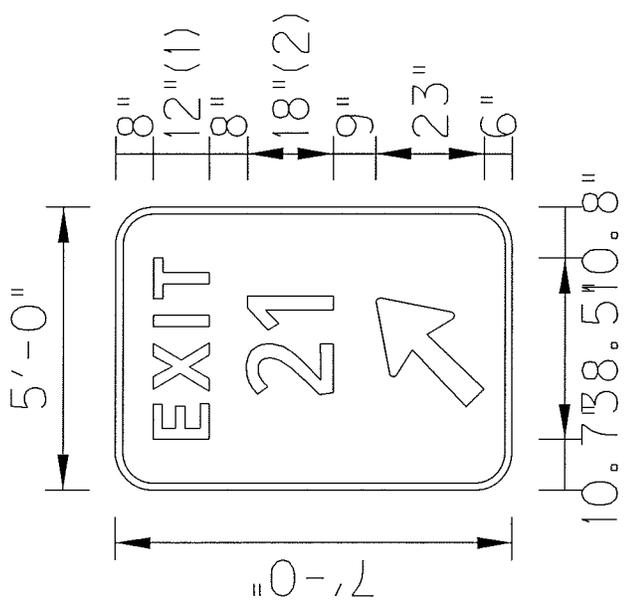
ITEM NOS 5-2045.00 & 5-2047.00

JEFFERSON COUNTY

FD52 056 0264 012-019

ARRA 264 - 1(164)

SIGN DETAIL FOR EB & WB "EXIT 16" AND EB "EXIT 18" SIGNS



FONT:
(1) Clear viewHwy-5-W
(2) Clear viewHwy-3-W

REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2008.
2. FHWA Manual on Uniform Traffic Control Devices.
3. Active Sepia List

<u>Drawing No.</u>	<u>Drawing Name</u>
002	Delineators for Guardrail
003	Treatment of Open Sinkholes
004	Concrete Barrier Wall Type 9T (Temporary)
005	Type D Breakaway Sign Support
009	Culvert, Entrance & Storm Sewer Pipe Types & Cover Heights (12" Pipe to 24" Pipe)
011	Culvert, Entrance & Storm Sewer Pipe Types & Cover Heights (48" Pipe to 54" Pipe)
020	Guardrail End Treatment Type 4A

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

RBC-001	Guardrail Connector to Bridge End Type A and A1
RBC-002	Guardrail Connector to Bridge End Type A and A1 Components
RBC-003	Guardrail Connector to Bridge End Type A and A1 Components
RBE-060	Crash Cushion Type VI (One & Two Direction)
RBE-100	Crash Cushion Type VI - BT & CT
RBI-001	Typical Guardrail Installations
RBI-002	Typical Guardrail Installations
RBI-004	Installation of Guardrail End Treatment Type 1
RBI-006	Guardrail Installation at Sign Supports
RBM-001	Concrete Median Barrier Fixed-Form or Slip-Form (Permanent)
RBM-015	Concrete Median Barrier Symmetrical and Asymmetrical Separate and Transition Details
RBM-020	Delineators for Concrete Barriers
RBR-001	Steel Beam Guardrail ("W" Beam)
RBR-005	Guardrail Components
RBR-010	Guardrail Terminal Sections
RBR-015	Guardrail Posts
RBR-016	Guardrail Posts
RBR-020	Guardrail End Treatment Type 1
RBR-025	Guardrail End treatment Type 2A

RBR-030	Guardrail End Treatment Type 3
RDB-001	Drop Box Inlet Type 1
RDB-013	Drop Box Inlet Type 13 (Detail Sheet)
RDB-014	Drop Box Inlet Type 13 and Type 16 (Frame and Grate Details)
RDB-015	Drop Box Inlet Type 13 (Detail & Bar Chart for Lid)
RDB-017	Drop Box Inlet Type 13 (Pipe Chamber - Sag Condition)
RDB-100	Sloped Box Outlet Type 1
RDB-101	Grates for Sloped Box Outlet Type 1
RDB-105	Sloped and Flared Box Inlet-Outlet
RDB-106	Grates for Sloped and Flared Box Inlet-Outlet
RDD-021	Flume Inlet Type 2
RDD-040	Channel Lining Class II and III
RDH-020	Sloped & Flared Headwalls for 12" to 27" Pipe
RDH-110	Pipe Culvert Headwalls 0 Degrees Skew
RDH-210	Dimensions & Quantities 30" - 108" Headwalls Circular Pipe 0 Degrees Skew
RDH-310	Bill of Reinforcement 30" - 90" Diameter Circular Pipe Headwalls 0 Degrees Skew
RDI-020	Pipe Bedding for Culverts, Entrance and Storm Sewer Pipe
RDI-021	Pipe Bedding for Culverts, Entrance and Storm Sewer Reinforced Concrete Pipe
RDI-026	Pipe Bedding Trench Condition Reinforced Conc. Pipe
RDM-105	Frame and Lid Type 2
RDP-001	Perforated Pipe Types and Cover Heights
RDP-005	Perforated Pipe for Subgrade Drainage on Two-Lane (class 2) and Multi-Lane Roads
RDP-010	Perforated Pipe Headwalls
RDX-001	Junction Box
RDX-002	Junction Box (Dimensions & Quantities)
RDX-050	Subgrade Drainage Concrete Pavement
RDX-160	Security Devices for Frames, Grates and Lids
RDX-060	Intermediate and End Anchors for Circular Pipe
RDX-210	Temporary Silt Fence
RDX-220	Silt Trap Type A
RDX-225	Silt Trap Type B
RDX-230	Silt Trap Type C
RFC-001	Chain Link Fence 4' to 6' High
RGS-002	Superelevation for Multilane Pavement
RGX-001	Miscellaneous Standards Part I
RGX-200	One Point Proctor Family of Curves
RPM-100	Curb and Gutter, Curbs, and Valley Gutter
RPM-145	Rumble Strips Type 3
RPN-001*	Jointed Plain Concrete Pavement for Shoulders and Medians
RPN-010	Pavement Transitions & Joint Details for Jointed Plain Concrete Pavement at Bridge Ends

RPN-015*	Non-Reinforced Concrete Pavement
RPN-020	Concrete Pavement Joints Types and Spacing
RPS-010	Cement Concrete Pavement Joint Details
RPS-020*	Expansion and Contraction Joint Load Transfer Assemblies
RPS-030*	Concrete Pavement Joints Types and Spacing
RPS-031	Concrete Pavement Joints Types and Spacing
RPS-033	Concrete Pavement Joints Types and Spacing
RPS-035	Concrete Pavement Joints Types and Spacing
RPS-036	Concrete Pavement Joints Types and Spacing
RPS-037	Concrete Pavement Joints Types and Spacing
RPS-038	Concrete Pavement Joints Types and Spacing
RPS-039	Concrete Pavement Joints Types and Spacing
RPX-001	Station Markings Concrete Pavement
RPX-010	Preformed Compression Joint Seal for Concrete Pavement
RPX-015	Hot-Poured Elastic Joint Seals for Concrete Pavement
RPX-020	Silicone Rubber Seals for Concrete Pavement
TPM-105	Pavement Marker Arrangements Multi-Lane Roadways
TPM-125	Pavement Marker Arrangement Exit Gore and Off-Ramp
TPM-130	Pavement Marker Arrangement On-Ramp with Tapered Acceleration Lane
TPM-135	Pavement Marker Arrangement On-Ramp with Parallel Acceleration Lane
TTC-115	Lane Closure Multi-Lane Highway Case I
TTC-120	Lane Closure Multi-Lane Highway Case II
TTC-125	Double Lane Closure
TTC-135	Shoulder Closure
TTC-155	Temporary Pavement Marker Arrangements for Construction Zones
TTC-160	Temporary Pavement Marker Arrangements for Lane Closures
TTD-110	Post Splicing Detail
TTD-120	Work Zone Speed Limit and Double Fine Signs
TTD-125	Pavement Condition Warning Signs
TTS-110	Mobile Operation for Paint Striping Case III
TTS-115	Mobile Operation for Paint Striping Case IV
TTS-120	Mobile Operation for Durable Striping Case I
TTS-125	Mobile Operation for Durable Striping Case II

* - Older "Standard Drawings" showing skewed joints have been included for reference.

5. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2008, Appendix B - Supplemental Specifications, as applicable:

Special Note 1I	Portable Changeable Message Signs (3/1/2008)
Special Note 10E	QC/QA Specifications for Class P Concrete (3/1/2008)
Special Note 10T	Acceptance of JPC Pavement Thickness 2004 (1/1/2008)
Special Note 10W	Water Blasting Striping Removal (1/1/2008)
Special Note	Installation of Traffic Loops (4-11-2006) <i>attached</i>
Special Note	Typical Section Dimensions <i>attached</i>
Special Note	Removing Existing Pavement Markers on Portland Cement Pavement <i>attached</i>
Special Note	Before You Dig <i>attached</i>
Special Note	Guardrail Delivery Verification Sheet <i>attached</i>
Special Note	Fixed Completion Date and Liquidated Damages <i>attached</i>
Special Note	Shoulder Preparation and Restoration <i>attached</i> (See MOT Notes)
Special Note	Partial Depth Concrete Pavement Repair <i>attached</i>
Special Note	Full Depth Concrete Pavement Repair <i>attached</i>
Special Note	References to Special Provision 76 <i>attached</i>
Special Note	Ride Quality Adjustment for Diamond Grinding <i>to be added by addendum</i>
Special Note	Erosion Control <i>attached</i>
Special Note	Signs on Projects funded by the American Recovery and Reinvestment Act (ARRA) of 2009 <i>attached</i>
Special Note	Bridge Repair Items <i>attached</i>

**SPECIAL NOTE FOR SIGNS ON PROJECTS BEING FUNDED BY THE
AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) OF 2009**

This Special Note will apply where indicated in the proposal. Section references herein are to the Department’s 2008 Standard Specifications for Road and Bridge Construction.

1.0 Description. Furnish, install, and maintain ARRA signs as shown in the proposal or designated by the Engineer. Two ARRA signs will be required for each project. See the sign detail sheet for exact dimensions for the sign.

Speed Limit (MPH)	“A” Dimension	“B” Dimension
65 or Greater	120 inches	84 inches
55 or Less	84 inches	60 inches

2.0 Materials. ARRA signs shall be constructed and installed in accordance with signing details included with this note. Conform to Sections 830, 832 and 833.

3.0 Construction. ARRA signs should be placed where they can be easily identified with the corresponding projects and in a location that does not conflict with higher priority signs (temporary or permanent), traffic signals or any temporary traffic control device. In no case shall these signs be installed such that it obscures the view of other traffic control devices.

ARRA signs shall not be installed at the following locations: Near any traffic control device, roadway structure, exit and entrance ramps, intersections, highway-rail grade crossings, and areas of limited sight distance.

The signs installed on roadways with a speed limit of 65 mph or greater shall be installed using traffic notes for temporary signs on wood posts. All other signs should be installed using two Type II channel posts as shown in the attached detail. Sign bracing will be required as shown in the attached details.

4.0 Measurement. The Department will measure the quantity in square feet. The Department will not measure sign maintenance, posts, mounting, installation or any required bracing for payment and will consider them incidental to this item of work.

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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02562	Signs	Square Foot

3/23/2009

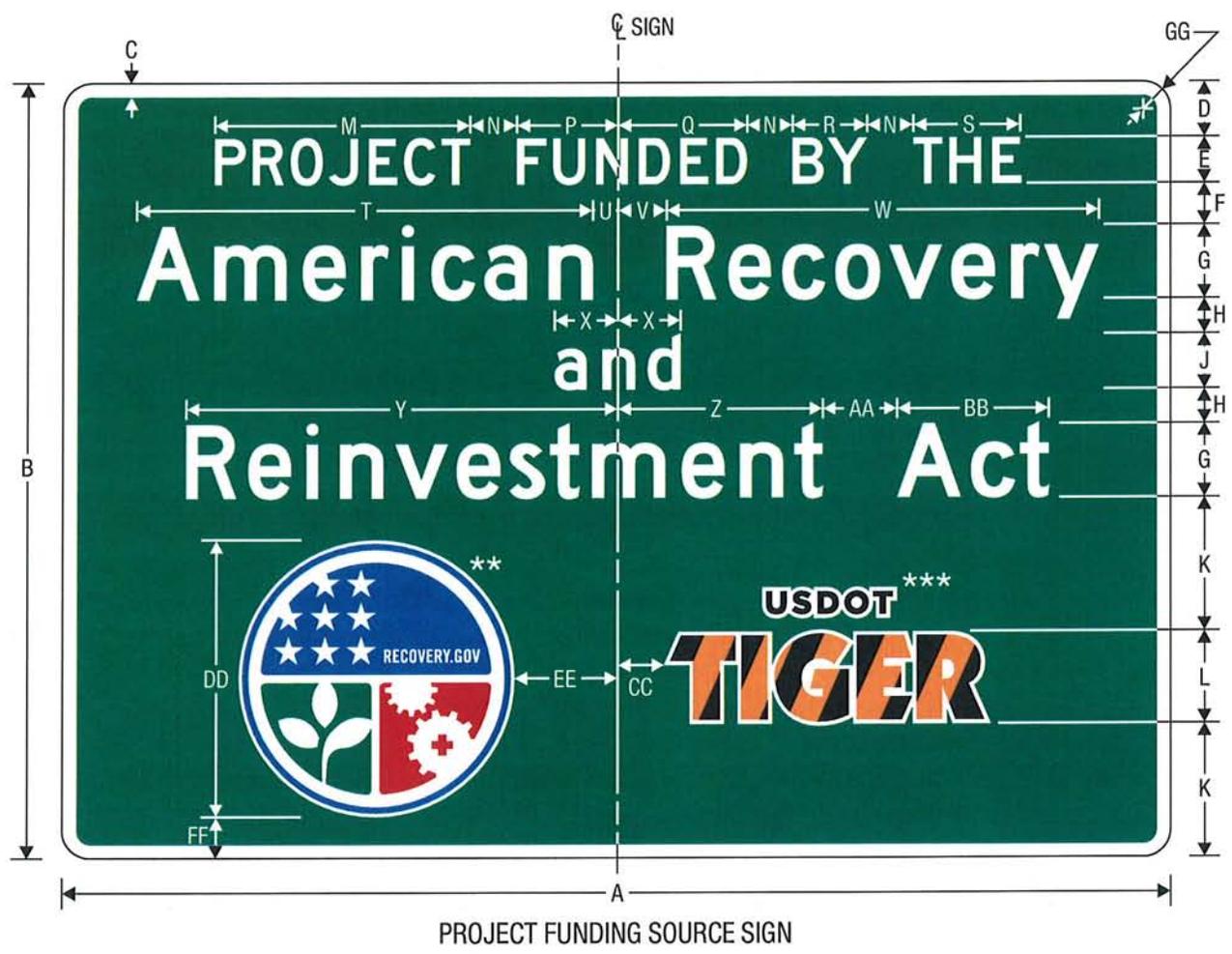
PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



PROJECT FUNDING SOURCE
SIGN ASSEMBLY

3/23/2009

PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



NOTE: SIGN SHALL NOT BE INSTALLED WITHOUT PROJECT FUNDING SOURCE PLAQUE (SEE SHEET 3).

Dimensions in inches

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	84	1.5	6	5 D	4.5	8 D*	3.75	6 D*(45LC)	14.5	10	27.917	5	10.831
84	60	1	5	4 C	3.5	6 C*	3	4 D*(3LC)	9.25	7	19.047	4	7.362

Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD
14.087	8.106	11.556	49.42	2.742	5.258	46.904	6.812	46.76	22.472	8	16.288	5	30
9.484	5.162	7.763	31.722	2.415	3.585	30.552	4.542	30.911	14.737	6	10.175	4	21

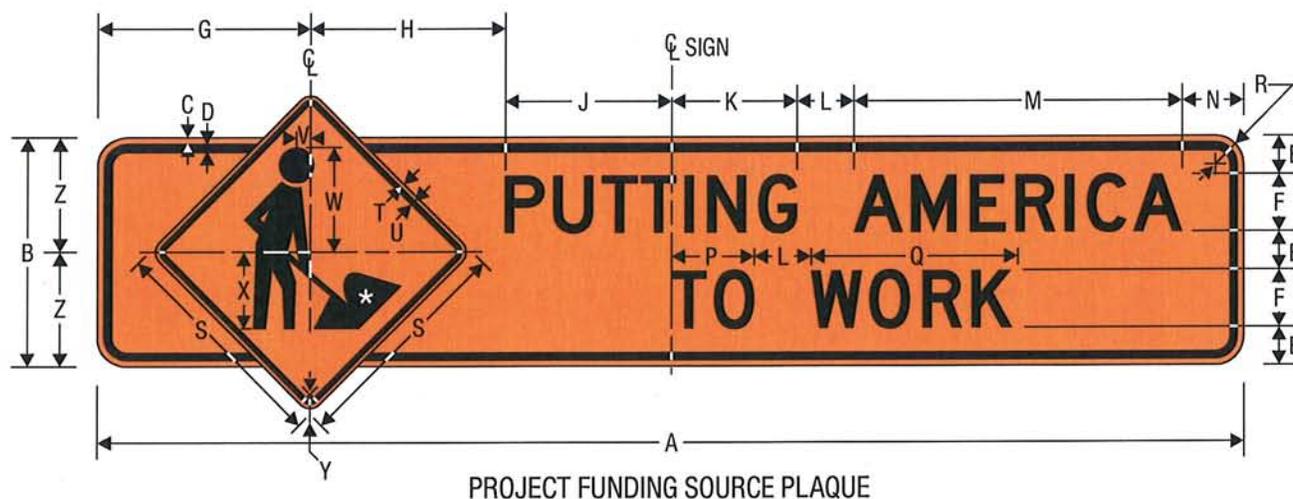
EE	FF	GG
11	4.5	3
7.5	2.25	2.25

- * Increase character spacing 50%
- ** See Pictograph page 4
- *** See Pictograph page 5

COLORS: LEGEND, BORDER — WHITE (RETROREFLECTIVE)
BACKGROUND — GREEN (RETROREFLECTIVE)

3/23/2009

PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



NOTE: PLAQUE SHALL NOT BE INSTALLED
WITHOUT SIGN (SEE SHEET 2).

* See *Standard Highway Signs*
Page 6-59 for symbol design.

Dimensions in inches

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	24	0.625	0.875	4	6 D	22.349	20.370	17.281	13.28	6	34.22	6.5	8.765
84	18	0.375	0.625	3.5	4 D	16.607	15.686	9.707	10.667	4	22.813	5	5.843

Q	R	S	T	U	V	W	X	Y	Z
21.013	3	24	0.375	0.625	1.5	11	8	1.5	12
14.009	2.25	18	0.375	0.625	1	7	6	1.5	9

COLORS: LEGEND, BORDER — BLACK
BACKGROUND — ORANGE (RETROREFLECTIVE)

3/23/2009

PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



RECOVERY
Vector-Based, Vinyl-Ready Pictograph

- | | |
|--------------------------|---------------------------|
| COLORS: LEGEND, OUTLINE | — WHITE (RETROREFLECTIVE) |
| BORDER | — BLUE (RETROREFLECTIVE) |
| BACKGROUND (UPPER) | — BLUE (RETROREFLECTIVE) |
| BACKGROUND (LOWER RIGHT) | — RED (RETROREFLECTIVE) |
| BACKGROUND (LOWER LEFT) | — GREEN (RETROREFLECTIVE) |

3/23/2009

PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



USDOT TIGER
Vector-Based, Vinyl-Ready Pictograph

COLORS: OUTLINE — WHITE (RETROREFLECTIVE)
USDOT LEGEND — BLACK
TIGER DIAGONALS — BLACK,
ORANGE (RETROREFLECTIVE)

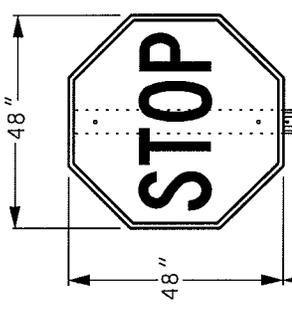
Traffic Notes For Temporary Signs

The Contractor shall use 6 inch x 8 inch (nominal) pressure treated southern pine wood posts to mount the large temporary signs. The posts that are exposed to traffic shall have two (2) holes, three (3") inches in diameter drilled through each post in a vertical arrangement perpendicular to traffic. The first hole should be four inches (4") from the ground and the second hole, eighteen inches (18") from the ground.

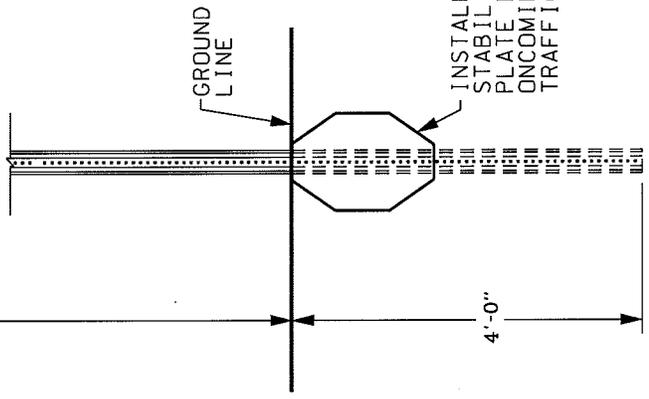
A seven-foot (7') or more clear path should exist between the supporting posts. The bottom edge of the sign panel should have at least seven foot (7') clearance above the ground. Posts shall be embedded a minimum of 48 inches.

Bolt signs to the wood posts using three 5 inch galvanized lag bolts in each post, with galvanized washers on both sides. The top and bottom bolts shall be placed a minimum of 12 inches from the top and bottom edges respectively, with the third bolt centered on the sign.

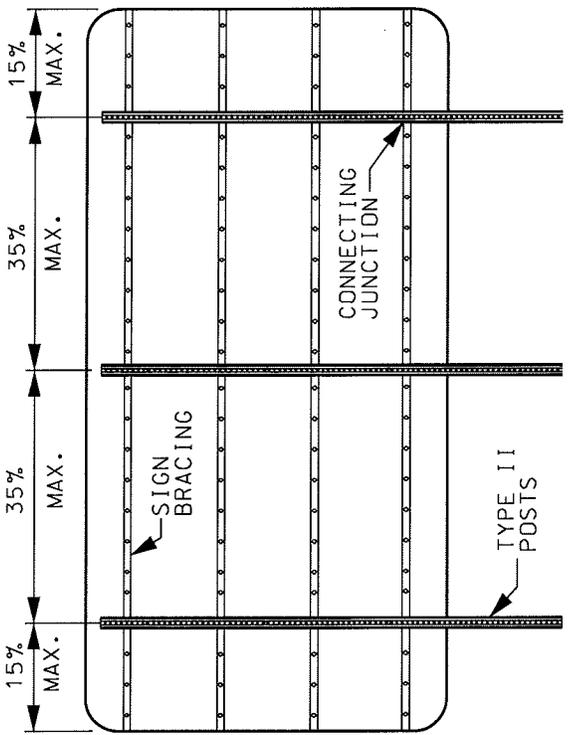
For additional details see the Federal Highway Administration memorandum HNG-14/SS-25 dated 6/4/91, HNG-14/SS-36 dated 9/3/93 and HNG-14/SS-27 dated 5/15/92.



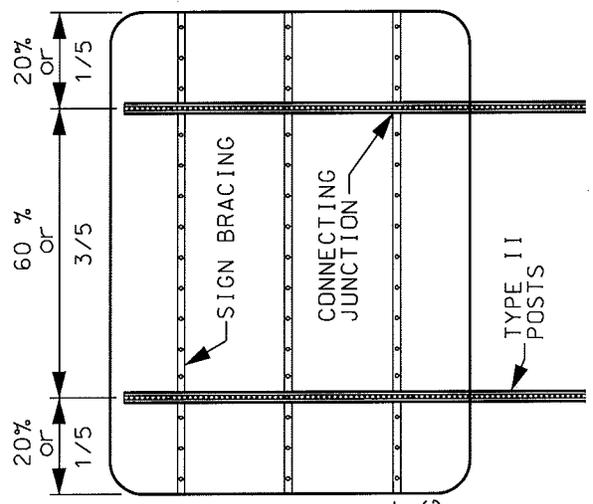
7'-0" MINIMUM
NOT TO SCALE



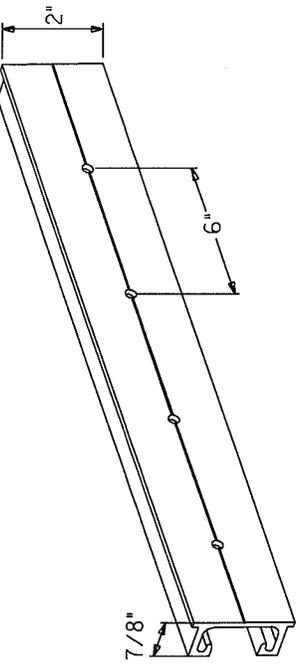
TYPE II
CHANNEL POST
WITH SOIL STABILIZER



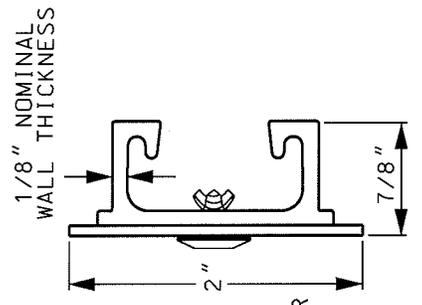
3 POST - BRACING DIAGRAM



2 POST - BRACING DIAGRAM



SHEETING SIGN BRACING



SIGN BRACE

NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE
x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

6061-T6 ALUMINUM ALLOY,
PUNCHED WITH 3/16" DIAMETER
HOLES ON 6" CENTERS FOR
ATTACHMENT OF SIGN
SUBSTRATE USING RIVETS

- NOTES:**
1. VERTICAL SPACING NOT TO EXCEED 36" BETWEEN BRACES OR 12" FROM TOP OR BOTTOM OF SIGN TO FIRST BRACE.
 2. MAXIMUM AREA PER CONNECTING JUNCTION = 16 SQ. FT.
 3. LENGTH OF BRACE TO BE A MINIMUM OF TOTAL SIGN WIDTH LESS 4", NOT TO EXTEND BEYOND RIGHT OR LEFT EDGE OF SIGN.
 4. POSTS, BRACING, AND SOIL STABILIZER SHALL BE INCIDENTAL TO SIGNS.

Item No. 5-2040.00
I-65, Hardin/Bullitt Counties
IM 65-5(100)

SPECIAL NOTE FOR PARTIAL DEPTH CONCRETE PAVEMENT REPAIR

This Special Note applies to partial depth repairs of concrete pavement. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove and replace small, shallow areas of deteriorated concrete that extend no deeper than one-third of the slab thickness. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

2.0 MATERIALS AND EQUIPMENT.

2.1 Rapid Set Concrete Patching Materials. See the List of Approved Materials for Rapid and Very Rapid hardening materials from the Division of Materials.

2.2 Hot-Poured Elastic and Silicone Rubber Sealant. Conform to Subsection 807.03.01 or 807.03.05.

2.3 Hammers. Only use chisel point hammers weighing less than 15 pounds to remove deteriorated concrete.

3.0 CONSTRUCTION.

3.1 Repair Dimension Selection. The locations for partial-depth repair will be identified in the plans or proposal or as specified by the Engineer during construction. Identify the repair boundaries by sounding the concrete with a solid steel rod, a heavy chain, or a ball peen hammer. Repair boundaries should extend a minimum of 3 inches outside unsound areas.

3.2 Concrete Removal. Saw the hole to be patched with a vertical face, to a 2-inch minimum depth and to the configuration the Contract specifies or the Engineer directs. After sawing, keep exposure to traffic to a minimum until patching.

If the area to be patched is deeper than 1/3 the slab depth, construct full depth patches according to the "Special Note for Full-Depth Concrete Pavement Repair". Partial depth patches that become full depth repairs will be paid forty (40) percent of the unit price for Partial Depth Patching.

Keep overcutting beyond the limits of the removed area to a minimum. Prevent saw slurry from entering existing joints and cracks. Clean all saw slurry and other contaminants from overcutting. Repair the overcut area with a low viscosity epoxy compound.

3.3 Repair Area Preparation. Following the removal of the concrete, the surface of the repair area must be prepared to provide a clean, irregular surface for the development of a good bond between the repair material and the existing slab.

Clean the repair area by sandblasting followed by compressed airblasting to remove dirt, oil, thin layers of unsound concrete, and laitance. The compressed air used in the final cleaning must be free of oil. This should be checked by placing a cloth over the air compressor nozzle and visually inspecting for oil.

Item No. 5-2040.00
I-65, Hardin/Bullitt Counties
IM 65-5(100)

3.4 Joint Preparation. Partial-depth repairs placed against transverse joints require the use of an insert to act as a bondbreaker or joint reformer. Place the insert so that it prevents intrusion of repair material into the joint opening. Insure the compressible insert extends 1 inch below and 3 inches beyond the repair boundaries. Prior to placement, score the insert at the appropriate depth to accommodate the joint sealant material to be used. Once the patch has cured or set, remove the scored top strip to allow for the joint sealant to be placed.

3.5 Patching Material and Placement.

3.5.1 Rapid Set Concrete Patching Materials. Furnish a repair material specified as "Rapid" or "Very Rapid" hardening listed on the Division of Materials *List of Approved Materials*. A substitute product may be allowed only after submittal and approval by the Division of Materials. Repair materials should be installed according to the manufacturer's recommendations. All materials used will be tested prior to the project beginning to insure that a minimum opening compressive strength of 3,000 psi can be obtained based on the time requirements listed in the maintenance of traffic notes for the project. No asphaltic based materials will be allowed.

Remove and replace all areas of the patches that display cracks or are not bonded to the underlying pavement.

3.6 Joint Sealing. Seal all new or partially new joints with hot-poured elastic or silicone rubber sealant according to Subsection 501.03.18 D).

4.0 MEASUREMENT.

4.1 Partial Depth Patching. The Department will measure the quantity in cubic feet, either from field measurements or the metered quantity from the mixer, as the Engineer determines.

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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
	Polymer Pavement Repair	Cubic Foot

The Department will consider payment as full compensation for all work required in this provision.

March 20, 2009

SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR

This Special Note applies to full depth repairs of concrete pavement. This note supersedes Special Provision 76 in the 2008 Standard Specifications. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove and replace concrete pavement. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

2.0 MATERIALS AND EQUIPMENT.

2.1 JPC Pavement. Test concrete materials according to section 601.03.03. Conform to 501, 502, and 601 except that the concrete must achieve 3000 psi in accordance with Section 4.4 of this note. The Engineer may allow pavement to be opened to traffic at less than 3,000 psi subject to the deductions described in Section 4.4 of this note.

2.2 Dowel Bars and Sleeves. Conform to 811

2.3 Tie Bars. Conform to Section 811. Use epoxy coated tie bars in longitudinal and transverse joints.

2.4 Joint Sealants. Conform to Subsection 807.03.01 or 807.03.05.

2.5 Grout Adhesives and Epoxy Resin Systems. Conform to Section 826.

2.6 Dense Graded Aggregate (DGA) and Crushed Stone Base (CSB). Conform to Section 805.

2.7 Geotextile Fabric. Conform to Section 843.

2.8 Drills. Drill holes using a gang drill, capable of drilling a minimum of four simultaneously. Misalignment of holes shall not exceed 1/4 inch in the vertical or oblique plane.

2.9 Hammers. Only use chisel point hammers weighing less than 40 pounds to remove deteriorated concrete.

3.0 CONSTRUCTION.

3.1 Removal of Existing Pavement. Remove existing pavement to the extent the Contract specifies or as the Engineer directs. The minimum length of patches measured along centerline is 3 feet on each side of an existing joint.

When working with pavements with non-skewed transverse joints, if it is necessary to remove existing pavement closer than 6 feet to a transverse joint, remove the pavement 3 feet beyond that joint .

When working with pavements with skewed transverse joints, if it is necessary

to remove existing pavement closer than 3 feet to a transverse joint, remove the pavement 3 feet beyond that joint.

Details of configurations of pavement and joints for various situations are depicted in the drawings herein.

When small areas of removal and replacement are performed at bridge ends, maintain or reconstruct existing expansion joints at their existing location. When the Engineer determines extensive full width removal and replacement is required, construct new expansion joints at the locations shown on Standard Drawing No. RPN-010.

In the removal operation, make a full depth saw cut longitudinally along the centerline joint and shoulder joint and transversely along the area marked for removal. To prevent damage to the subbase, do not allow the saw to penetrate more than ½" into the subbase. The Engineer may direct or approve additional cuts within the removal area for ease of removal of the damaged slab and to prevent damage to adjacent pavement to remain in place. Keep overcutting beyond the limits of the removal area to a minimum. Prevent saw slurry from entering existing joints and cracks. Clean all saw slurry and other contaminants from overcutting area. Repair overcut area with a low viscosity epoxy compound. To avoid pumping and erosion beneath the slab, do not allow traffic on sawed pavement for more than 48 hours before beginning removal procedures, unless directed by the Engineer.

Lift out the deteriorated concrete vertically with lift pins if at all possible. If approved by the Engineer, use other methods that do not damage the base, shoulder, or sides of pavement that is to be left in place. If any damage does occur, repair as the Engineer directs and use an acceptable alternative method for the removal process. Do not damage the pavement base during these operations.

3.2 Pavement Replacement. Do not damage the pavement base during these operations.

3.2.1 Preparation of Base. Compact the new and existing aggregate base to the Engineer's satisfaction. The Engineer will accept compaction by either visual inspection or by nuclear gauge. When the Engineer deems it necessary to stabilize the existing base or replace unsuitable materials, excluding bridge ends, use 12 inches of geotextile fabric wrapped No. 2 aggregate topped with 4 inches of DGA or CSB. Use either Type III or Type IV geotextile fabric. Flowable fill and cement stabilization may be used as an alternative to stabilize the existing base or to replace unsuitable materials when a plan for such is presented to and approved by the Engineer. The Engineer may also direct using only DGA or CSB to correct base deficiencies. At bridge ends, treat existing base and subgrade as the Contract specifies. During compaction, wet the base as the Engineer directs. Compact areas not accessible to compaction equipment by hand tamping.

3.2.2 Underdrains. Construct, or repair damage to, pavement edge drains according to Section 704. If underdrains are placed omitting areas to be patched, construct additional lateral drains as necessary to provide outlets for the installed underdrain until performing the pavement replacement and completing the underdrain system. Provide drainage for any undercut or base repair areas.

3.2.3 Pavement Replacement. Using load transfer assemblies for dowel joints drill into the existing slab according to the details shown herein

and on the Standard Drawings.

Use plain epoxy coated dowels of the size specified on the standard drawings based on the pavement thickness for contraction and expansion joints.

Drill holes for dowel bars and tie bars into the face of the existing slab, at a diameter as specified in the following. Drill the dowel bar holes and tie bar holes to a depth equal to 1/2 the length of the bars. Anchor tie bars into the existing pavement using an epoxy resin. Anchor dowel bars into the existing pavement using either an epoxy resin or an adhesive grout. For tie bars and dowel bars where an epoxy resin is to be used drill the holes 1/8 inch larger than the bar diameter. For dowel bars where an adhesive grout product is to be used, drill holes 1/4 inch larger than the bar diameter. Use a clear or opaque grout retention disk in both grout and epoxy applications. Operate the equipment to prevent damage to the pavement being drilled. Obtain the Engineer's approval of the drilling procedure. Install load transfer assemblies according to the Standard Drawings and Standard Specifications.

When indicated herein or in the Standard Drawings, use 1 inch deformed tie bars, 18 inches long on 30-inch centers and starting and ending 20 inches inside the edges of the repair area in the longitudinal joint. Use 1 inch deformed tie bars, or 1 inch plain dowel bars, 18 inches long beginning 12 inches inside of each edge and on 12-inch centers in transverse construction joints.

Install the dowels and tie bars according to Section 511 unless contradicted here. Ensure the holes are dry and free of dust and debris. Use a nozzle to insert the grout or epoxy starting at the back of the drilled hole to allow for full coating of the dowel or tie bar. After placement, use a bond breaker on the section of the dowel bar that is protruding from the hole.

Mix, place, finish, and cure concrete according to Section 501 with the exception that the Department will allow truck mixing, 2-bag mixers, and hand finishing.

When required, use a form on the side of the slab at longitudinal joints. When the adjacent traffic lane is not closed to traffic or the drop-off is not protected, temporarily fill the space between the form and the adjacent pavement with DGA. After placing the slab, remove the DGA and form. Fill the hole with concrete and thoroughly consolidate by rodding, spading, and sufficient vibration to form a dense homogeneous mass. Use a form on the side of the slab adjacent to shoulders. Excavate and backfill as shown on Section F'-F'.

For patches less than 25 feet in length, use a bond breaker and do not install tie bars at the longitudinal joint. Bond breakers should not exceed 1/8 inch in thickness, e.g. tar paper.

When resurfacing is required, a float finish is satisfactory. Otherwise, broom finish or, when the adjacent surface has a grooved finish, texture the surface according to Subsection 501.03.13 H). Finish the surface, including joints, to meet a surface tolerance of 1/8 inch in 10 feet that will be verified by straightedge. Cure the pavement and apply curing membranes according to 501.03.15.

Keep all pavement surfaces adjacent to this operation reasonably clean of excess grout and other materials at all times. Maintain all original longitudinal joints. Place transverse joints according to the details shown herein and on the Standard Drawings.

3.3 Joint Sealing. Seal all new or partially new joints with silicone rubber

sealant or hot-poured elastic joint sealant according to Subsection 501.03.18.

4.0 MEASUREMENT.

4.1 Remove JPC Pavement. The Department will measure the quantity in square yards of surface area. The Department will not measure removal of underlying base material for payment and will consider it incidental to Remove JPC Pavement.

4.2 DGA or CSB. The Department will measure the quantity used to stabilize the existing base or to replace unsuitable material in tons. The Department will not measure removal of existing base material or underlying material for payment and will consider incidental to DGA or CSB. The quantity of DGA used for the drop-off protection shall be incidental to this work and will not be measured for payment.

4.3 Non-Reinforced JPC Pavement. The Department will measure according to Subsection 501.04.01. The Department will not measure dowels, tie bars, hook bolts, or joint sealing for payment and will consider it incidental to Non-Reinforced JPC Pavement.

4.4 JPC Pavement. When listed as a bid item the Department will measure according to 501.04.01. The Department will not measure dowels, tie bars, hook bolts, or joint sealing for payment and will consider it incidental to Non-Reinforced JPC Pavement.

When not listed as a bid item, the Department will measure the quantity as Non-Reinforced JPC Pavement and make no additional payment for its use.

JPC Pavement will be paid according to section 5.0 below and according to the following payment schedule based on the compressive strength. The cylinders for payment will be tested two hours prior the scheduled opening of traffic.

3000 PSI and up	100% payment
2750 to 3000 PSI	75% payment and approval from the Engineer to open to traffic*
2500 to 2750 PSI	50% payment and approval from the Engineer to open to traffic*
2250 to 2500 PSI	25% payment and approval from the Engineer to open to traffic*
Below 2500 PSI	10% payment and no potential to open to traffic. Maintain traffic closure until concrete reaches a minimum of 2250 PSI.

*If the Engineer approves opening to traffic, the Engineer will evaluate the concrete at 28 days (or sooner) to determine if the removal and replacement of the concrete is necessary due to pavement distress induced by the early opening (i.e. noticeable cracking). If required by the Engineer, remove and replace those slabs showing distress at no cost to the Department.

4.5 Underdrains. The Department will measure the quantity according to Subsection 704.04. The Department will not measure lateral drains for payment and will consider them incidental to the Underdrains.

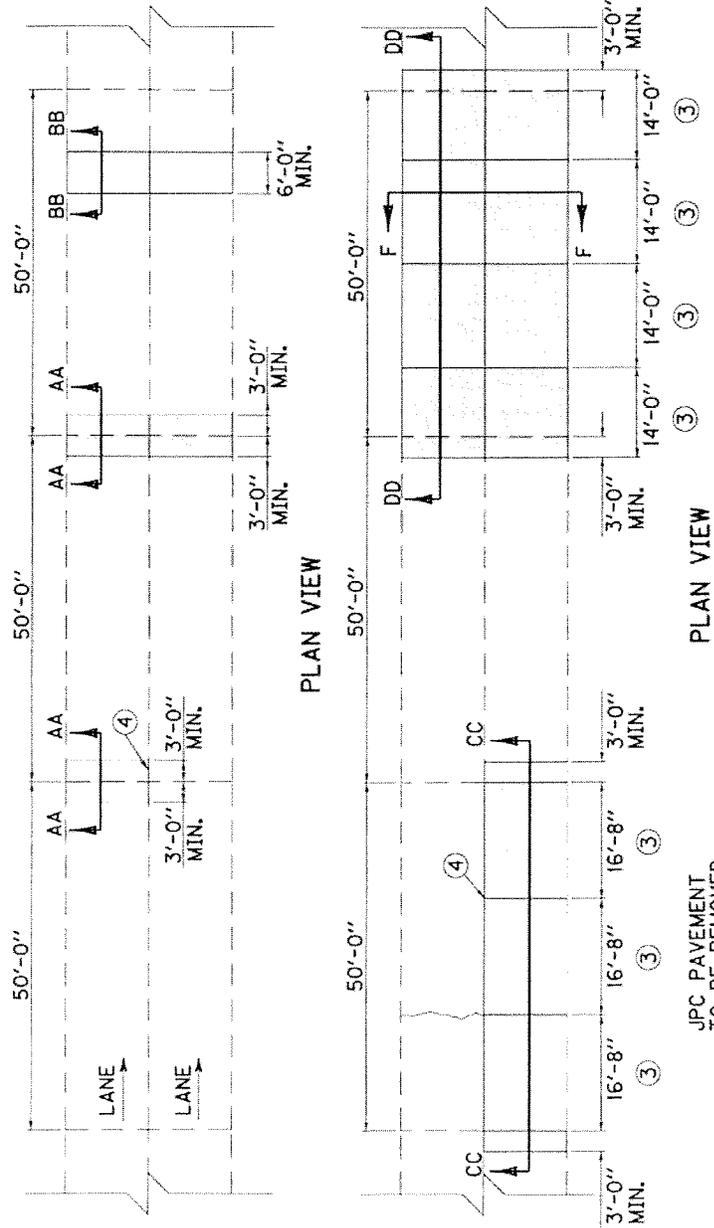
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
----	Remove JPC Pavement	Square Yard
00001	DGA Base	Ton
00003	Crushed Stone Base	Ton
02069-02071, 02073, 02075, 02084, 02086, 02088	JPC Pavement Non-Reinforced, thickness	See Subsection 501.05
01000	Perforated Pipe, 4-inch	Linear Foot
02598, 02599	Fabric-Geotextile, Type	Square Yard

The Department will consider payment as full compensation for all work required in this provision.

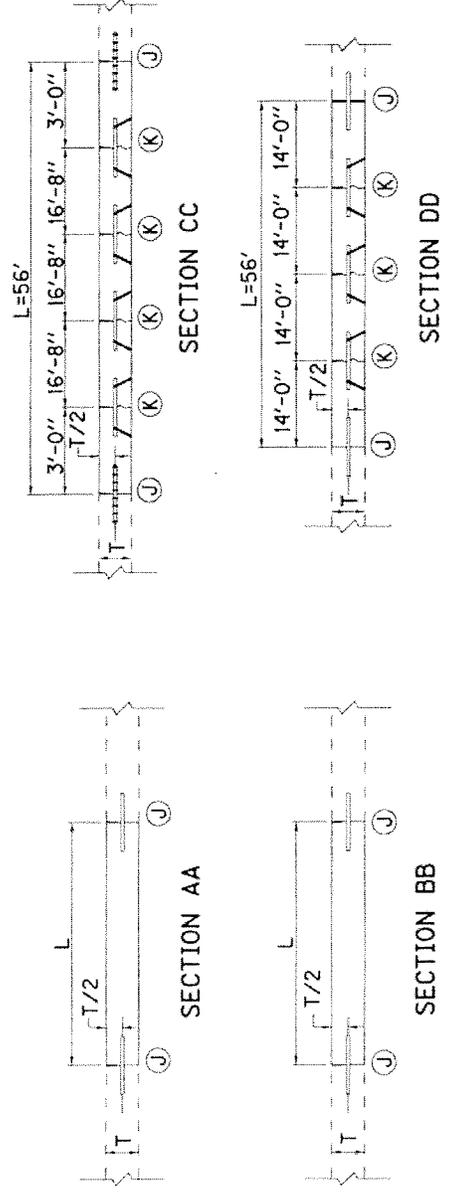
March 19, 2009

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION CC, 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L>25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



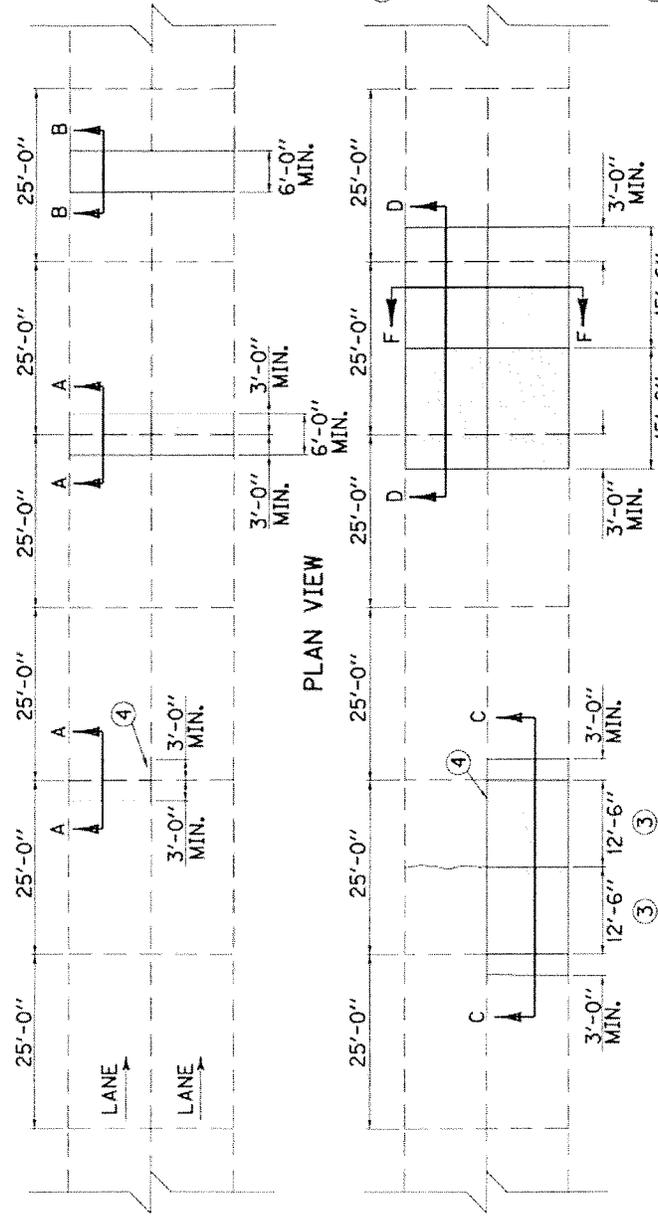
PLAN VIEW

JPC PAVEMENT
TO BE REMOVED



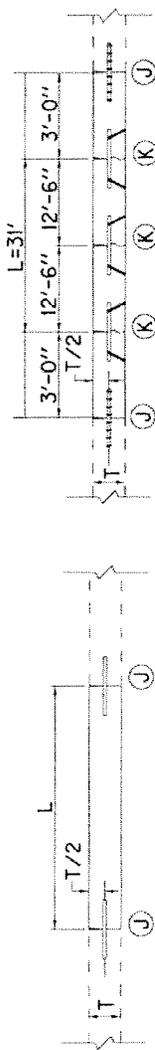
KENTUCKY DEPARTMENT OF HIGHWAYS
50' JOINT SPACING
SUBMITTED: _____ DATE: _____ THIS DIVISION OF DESIGN

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION C), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION C) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION C) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L > 25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L < 25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

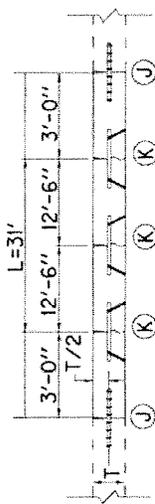


PLAN VIEW

JPC PAVEMENT TO BE REMOVED



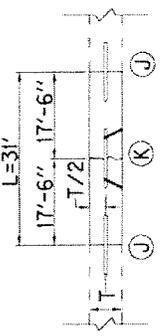
SECTION A



SECTION C



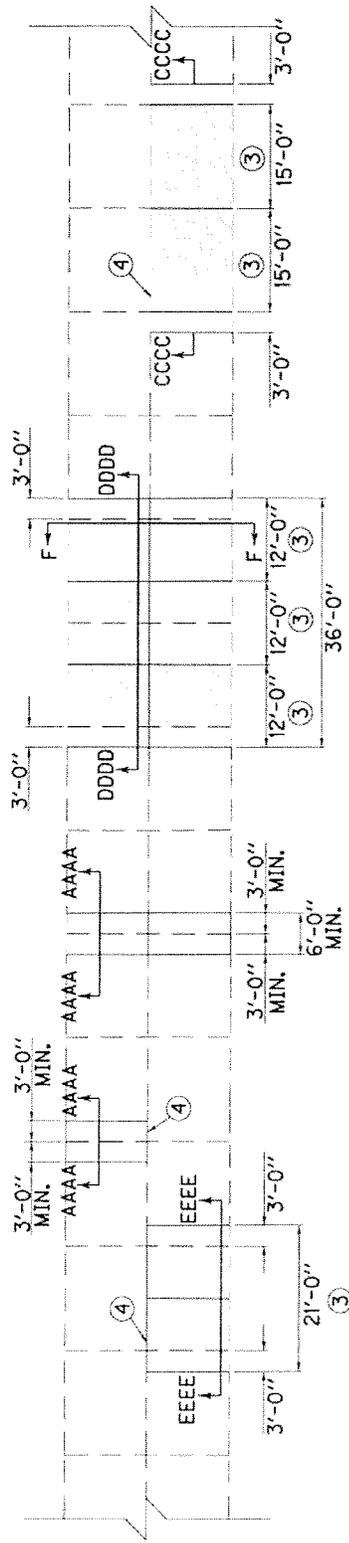
SECTION B



SECTION D

KENTUCKY DEPARTMENT OF HIGHWAYS
25' JOINT SPACING
APPROVED _____ DATE _____

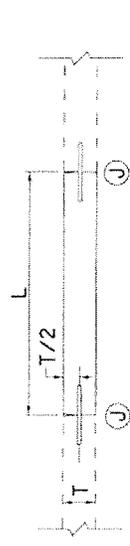
KENTUCKY DEPARTMENT OF HIGHWAYS
15' JOINT SPACING
APPROVED _____ DATE _____ TECH. DIVISION OF DESIGN



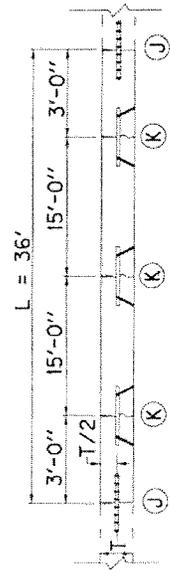
JPC PAVEMENT
TO BE REMOVED

PLAN VIEW

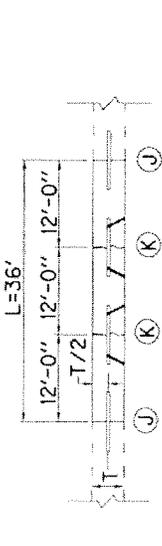
1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION CCCC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.



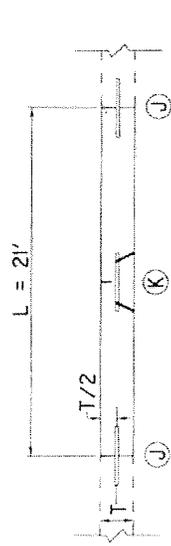
SECTION AAAA



SECTION CCCC



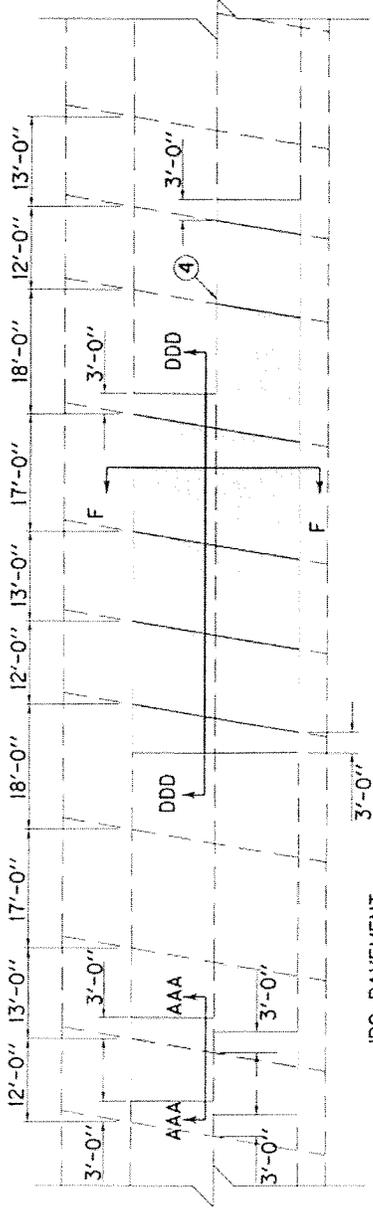
SECTION DDDD



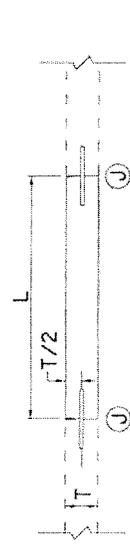
SECTION EEEE

3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L225' INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L225', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE. USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

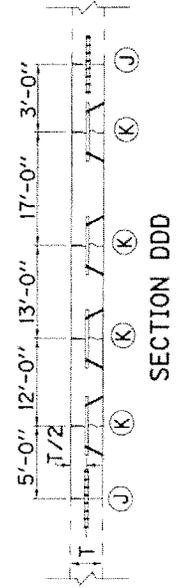
1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION DDD), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND MATCH EXISTING JOINTS. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH EXISTING JOINTS IN ADJACENT SLABS.
- ④ IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L>25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



PLAN VIEW

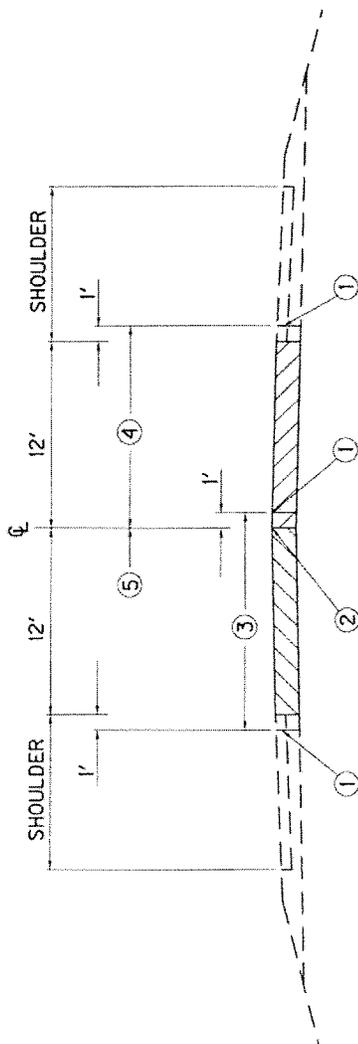


SECTION AAA



SECTION DDD

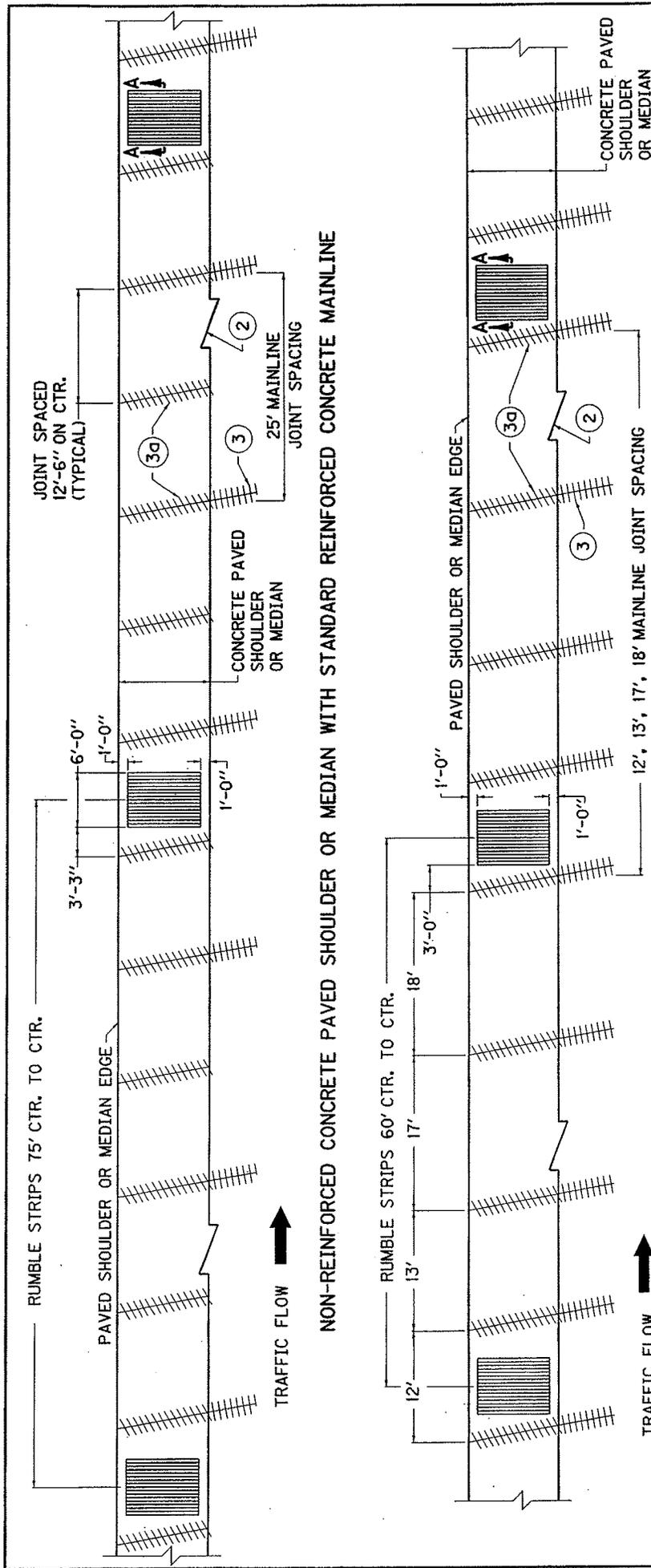
KENTUCKY DEPARTMENT OF HIGHWAYS
RANDOM SKEWED
APPROVED _____ DATE _____ NEW DIVISION OF DESIGN



SECTION F

- ① SAW-CUT LINE. THIS ONE FOOT IS TO ALLOW FOR A FORM AND THE REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WORK, EXCEPT NEW ASPHALT MIXTURE SHALL BE PAID DIRECT ON A TONNAGE BASIS, AND NEW JPC PAVEMENT WILL BE PAID BY THE SQUARE YARD. COMPACT THE DGA BASE BY MECHANICAL TAMPERS TO THE ENGINEER'S SATISFACTION.
- ② EXISTING LONGITUDINAL JOINT.
- ③ FIRST SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.
- ④ SECOND SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.
- ⑤ THIS ONE FOOT IS TO ALLOW FOR A FORM ON THE FIRST POUR, AND A TEMPORARY PAVEMENT IS REQUIRED. THE DEPARTMENT WILL NOT REQUIRE REMOVAL OF THIS ONE FOOT IF THE GRADE OF THE EXISTING PAVEMENT IS ADEQUATE TO ENSURE THE NEW CONCRETE CAN BE PLACED AND FINISHED TO THE SATISFACTION OF THE ENGINEER.
6. THE ABOVE DRAWING DEPICTS THE ORDER OF SLAB REMOVAL WHEN BOTH ARE TO BE REMOVED AT THE SAME LOCATION. WHEN ONLY ONE SLAB OR LANE IS TO BE REMOVED, REMOVE AND REPLACE ACCORDING TO SECTION C, CC, CCC OR CCCC. TRAFFIC CONTROL WILL SPECIFY WHICH LANE TO REMOVE FIRST.

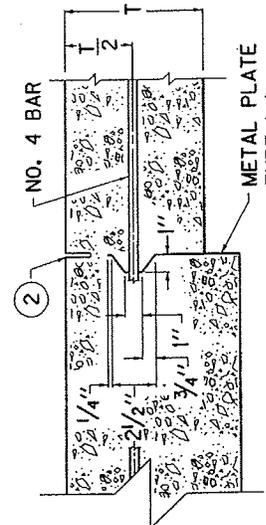
KENTUCKY DEPARTMENT OF HIGHWAYS
CROSS SECTION
APPROVED _____ TECH. DIVISION OF DESIGN _____ DATE _____



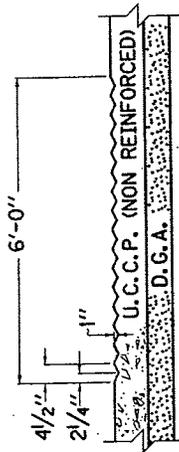
NON-REINFORCED CONCRETE PAVED SHOULDER OR MEDIAN WITH NON-REINFORCED CONCRETE MAINLINE

NOTES

1. THE COST OF CONSTRUCTING RUMBLE STRIPS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR NON-REINFORCED CONCRETE PAVEMENT.
2. (2) (3) SEE CUR. STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAILS.
3. AFTER FINAL FINISHING OF THE PAVEMENT, CORRUGATIONS FOR RUMBLE STRIPS SHALL BE FORMED AT THE INTERVALS SHOWN INTO THE PLASTIC CONCRETE.
4. THE CORRUGATIONS SHALL BE ROUNDED RATHER THAN PEAKED, WITH THE TOP FLUSH WITH THE SHOULDER OR MEDIAN SLOPE.
5. THE TROUGH SHALL BE TAILED OUT, SO AS TO PROVIDE POSITIVE DRAINAGE.



JOINT DETAIL

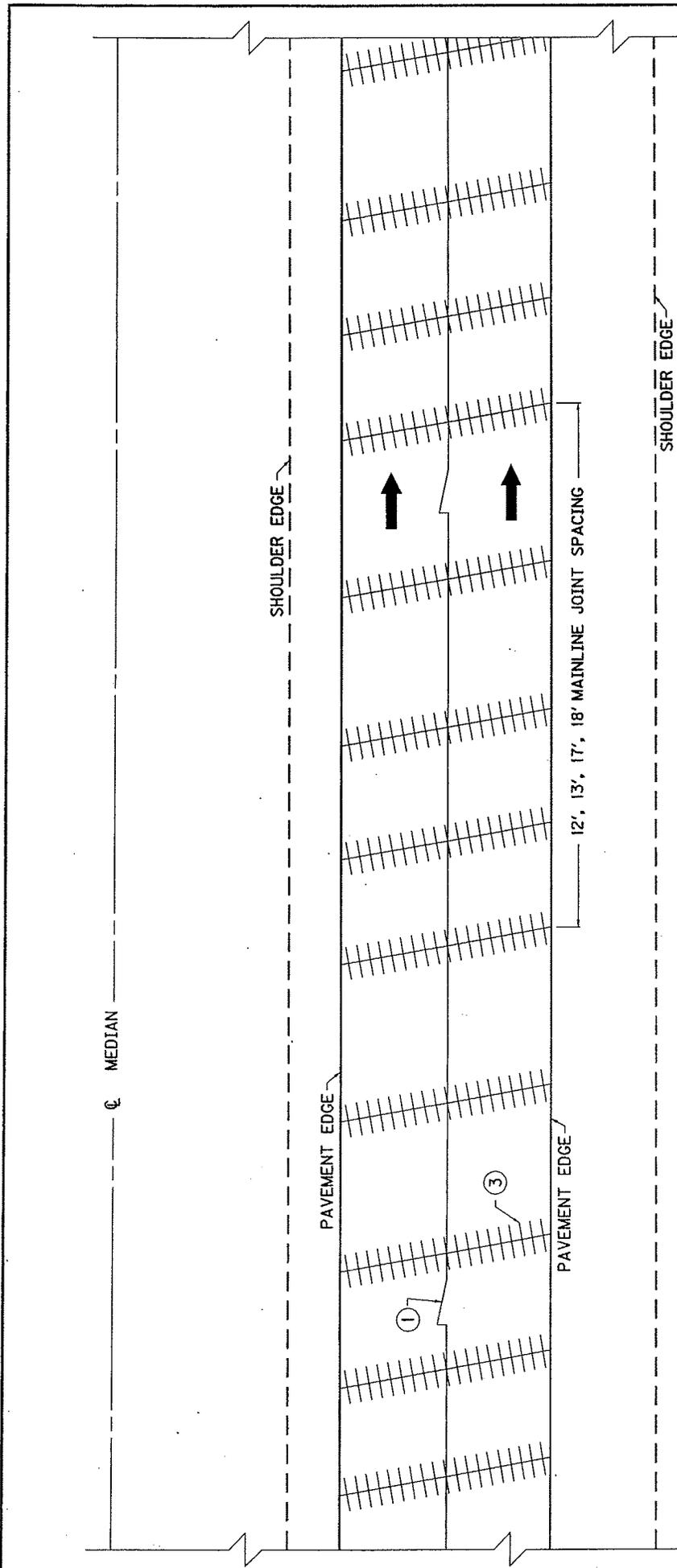


SECTION A-A

KENTUCKY
DEPARTMENT OF HIGHWAYS
NON-REINFORCED
CONCRETE PAVEMENT
FOR
SHOULDERS & MEDIANS
STANDARD DRAWING NO. RPN-001-04

APPROVED _____ DATE _____
SUBMITTED _____ DATE _____
DIRECTOR DIVISION OF DESIGN
STATE HIGHWAY ENGINEER

METAL PLATE FOR USE WITH CONCRETE SHOULDER PAVING CONSTRUCTED IN CONJUNCTION WITH MAINLINE PAVEMENT. IF OTHER ALTERNATES ARE USED, THE TIE-STEEL AND KEYWAY SHALL BE LOCATED IN ACCORDANCE WITH THIS DRAWING.



PLAN VIEW

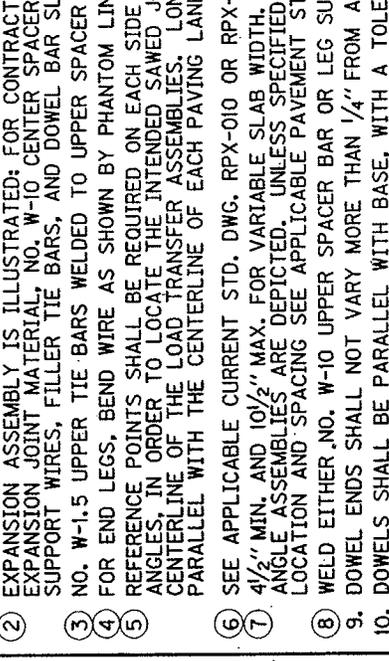
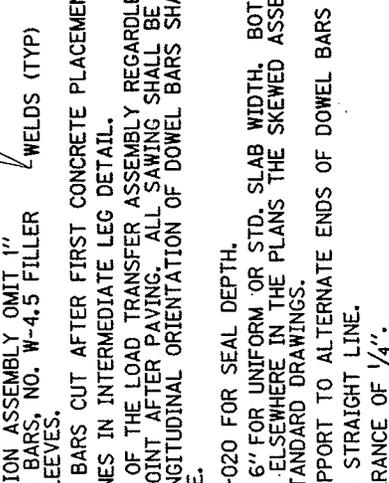
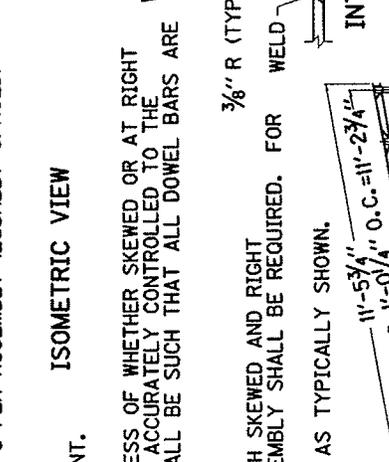
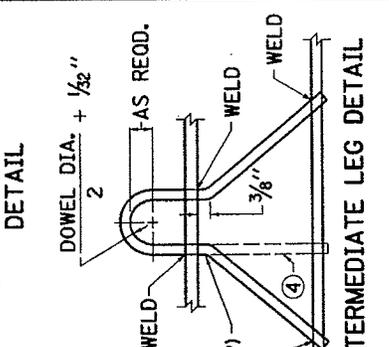
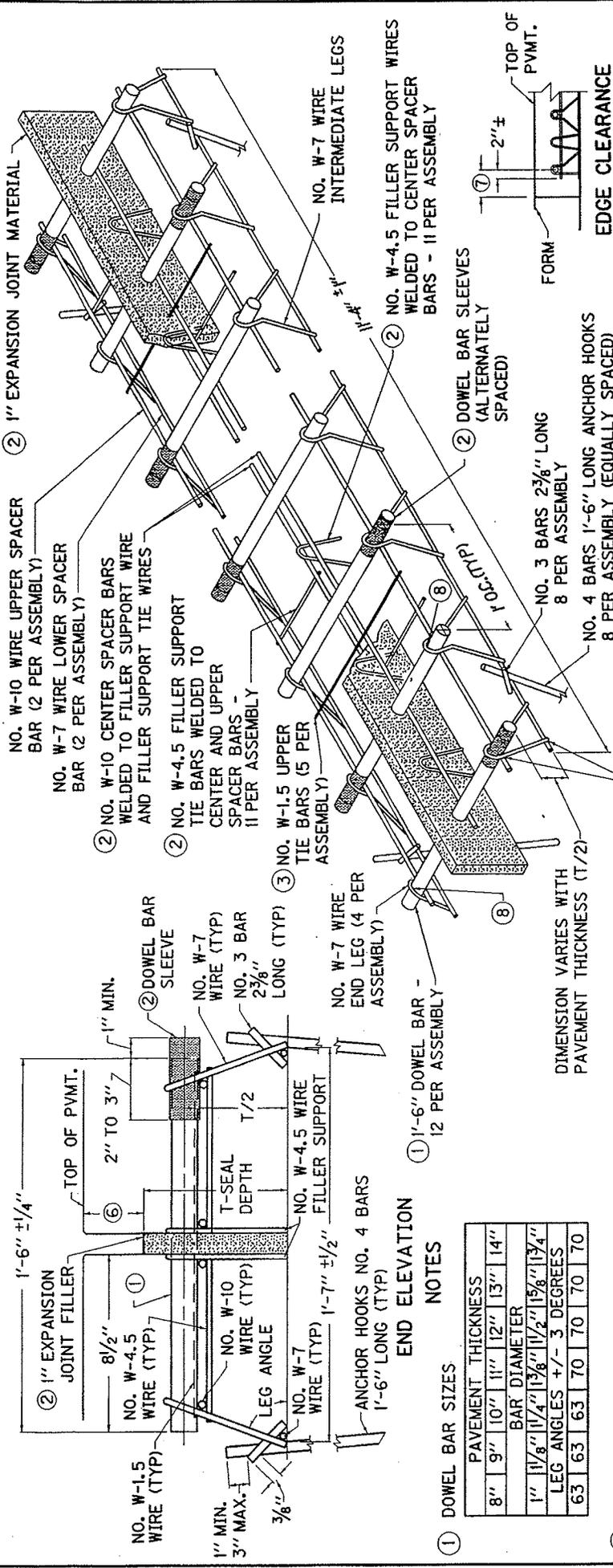
NOTES

- JOINTS**
- TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED AS FOLLOWS: 12', 13', 17', 18', AND SHALL BE SAWS TO A MINIMUM DEPTH OF ONE FOURTH OF THE PAVEMENT THICKNESS OR 1/4". ALL TRANSVERSE CONTRACTION AND TRANSVERSE EXPANSION JOINTS SHALL REQUIRE LOAD TRANSFER ASSEMBLIES AS DETAILED ON THE PLANS OR STANDARD DRAWINGS.
- JOINT SPACING AND TYPE, AT BRIDGE ENDS, SHALL BE REQUIRED AS SHOWN ON THE PLANS OR CURRENT STANDARD DRAWING RPS-010.
- TRANSVERSE CONTRACTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 501.03.16, EXCEPT THEY SHALL BE NO CLOSER THAN 5'-0" TO ANY TRANSVERSE CONTRACTION JOINT OR EXPANSION JOINT.
- ① ③ SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.
- THIS DRAWING DEPICTS JOINTS SKEWED TO THE CENTERLINE OF THE ROADWAY, HOWEVER JOINTS AT RIGHT ANGLES TO THE CENTERLINE SHALL BE SPACED IN THE SAME MANNER.

KENTUCKY DEPARTMENT OF HIGHWAYS	
NON-REINFORCED CONCRETE PAVEMENT	
STANDARD DRAWING NO. RPN-015-03	
SUBMITTED _____	DATE _____
APPROVED _____	DATE _____
<small>DIRECTOR DIVISION OF DESIGN STATE HIGHWAY DEPARTMENT</small>	

KENTUCKY
DEPARTMENT OF HIGHWAYS
EXPANSION AND
CONTRACTION JOINT LOAD
TRANSFER ASSEMBLIES
STANDARD DRAWING NO. RPS-020-11

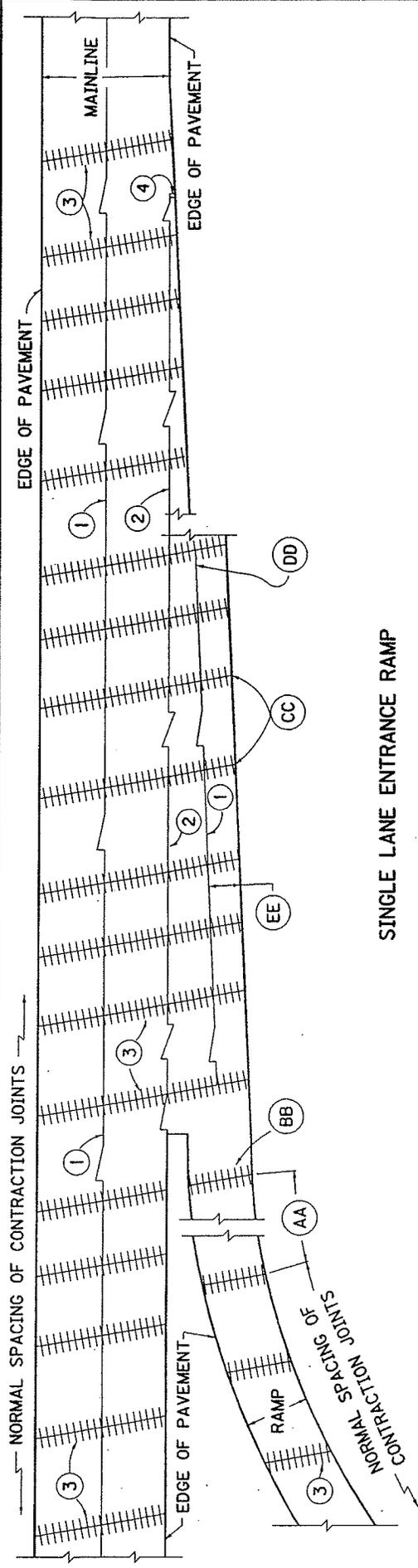
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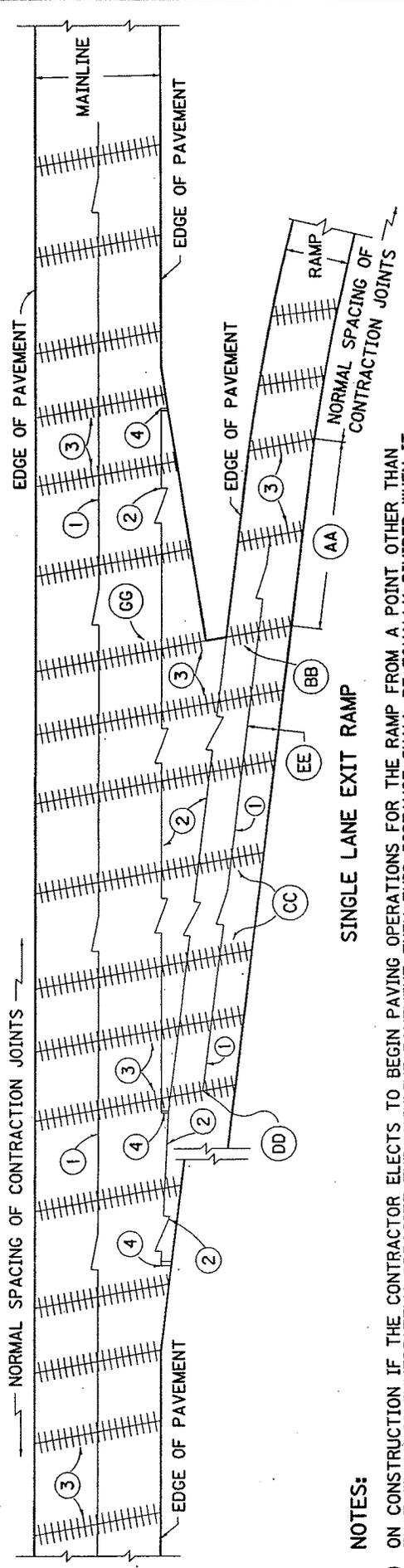
- ISOMETRIC VIEW**
- INTERMEDIATE LEG DETAIL**
- PLAN VIEW (SKEWED DETAIL)**
- PLAN VIEW (SKEWED DETAIL)**
- END ELEVATION**
- NOTES**
- DOWEL BAR SIZES
 - EXPANSION ASSEMBLY IS ILLUSTRATED FOR CONTRACTION ASSEMBLY OMIT 1" SUPPORT WIRES, FILLER TIE BARS, AND DOWEL BAR SLEEVES.
 - NO. W-1.5 UPPER TIE BARS WELDED TO UPPER SPACER BARS CUT AFTER FIRST CONCRETE PLACEMENT.
 - FOR END LEGS, BEND WIRE AS SHOWN BY PHANTOM LINES IN INTERMEDIATE LEG DETAIL.
 - REFERENCE POINTS SHALL BE REQUIRED ON EACH SIDE OF THE LOAD TRANSFER ASSEMBLY REGARDLESS OF WHETHER SKEWED OR AT RIGHT ANGLES, IN ORDER TO LOCATE THE INTENDED SAWED JOINT AFTER PAVING. ALL SAWING SHALL BE ACCURATELY CONTROLLED TO THE CENTERLINE OF THE LOAD TRANSFER ASSEMBLIES. LONGITUDINAL ORIENTATION OF DOWEL BARS SHALL BE SUCH THAT ALL DOWEL BARS ARE PARALLEL WITH THE CENTERLINE OF EACH PAVING LANE.
 - SEE APPLICABLE CURRENT STD. DWG. RPX-010 OR RPX-020 FOR SEAL DEPTH.
 - 4 1/2" MIN. AND 10 1/2" MAX. FOR VARIABLE SLAB WIDTH. 6" FOR UNIFORM OR STD. SLAB WIDTH. BOTH SKEWED AND RIGHT ANGLE ASSEMBLIES ARE DEPICTED. UNLESS SPECIFIED ELSEWHERE IN THE PLANS THE SKEWED ASSEMBLY SHALL BE REQUIRED. FOR WELD LOCATION AND SPACING SEE APPLICABLE PAVEMENT STANDARD DRAWINGS.
 - WELD EITHER NO. W-10 UPPER SPACER BAR OR LEG SUPPORT TO ALTERNATE ENDS OF DOWEL BARS AS TYPICALLY SHOWN.
 - DOWEL ENDS SHALL NOT VARY MORE THAN 1/4" FROM A STRAIGHT LINE.
 - DOWELS SHALL BE PARALLEL WITH BASE, WITH A TOLERANCE OF 1/4".
 - EPOXY SHALL BE CLEANED OFF TO BARE METAL BEFORE WELDING DOWEL TO WIRE.

DOWEL BAR SIZES

PAVEMENT THICKNESS	BAR DIAMETER	LEG ANGLES +/- DEGREES
8"	9"	10"
10"	11"	12"
12"	13"	14"
14"	15"	16"
16"	17"	18"
18"	19"	20"
20"	21"	22"
22"	23"	24"
24"	25"	26"
26"	27"	28"
28"	29"	30"
30"	31"	32"
32"	33"	34"
34"	35"	36"
36"	37"	38"
38"	39"	40"
40"	41"	42"
42"	43"	44"
44"	45"	46"
46"	47"	48"
48"	49"	50"
50"	51"	52"
52"	53"	54"
54"	55"	56"
56"	57"	58"
58"	59"	60"
60"	61"	62"
62"	63"	64"
64"	65"	66"
66"	67"	68"
68"	69"	70"
70"	71"	72"
72"	73"	74"
74"	75"	76"
76"	77"	78"
78"	79"	80"
80"	81"	82"
82"	83"	84"
84"	85"	86"
86"	87"	88"
88"	89"	90"
90"	91"	92"
92"	93"	94"
94"	95"	96"
96"	97"	98"
98"	99"	100"



SINGLE LANE ENTRANCE RAMP



SINGLE LANE EXIT RAMP

NOTES:

- AA ON CONSTRUCTION IF THE CONTRACTOR ELECTS TO BEGIN PAVING OPERATIONS FOR THE RAMP FROM A POINT OTHER THAN THAT WHICH IS IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT THEN THIS DISTANCE SHALL BE EQUALLY DIVIDED WHEN IT BECOMES GREATER THAN 20 FEET AND LESS THAN 40 FEET.
- BB THIS CONTRACTION JOINT IN THE RAMP SHALL ALWAYS BE OPPOSITE THE CONTRACTION JOINT IN THE MAINLINE PAVEMENT.
- CC ALL CONTRACTION JOINTS IN THE RAMP IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT SHALL BE A CONTINUATION OF THE JOINTS IN THE MAINLINE PAVEMENT.
- DD LONGITUDINAL SAWED JOINT SHALL END AT THE NEAREST CONTRACTION JOINT, WHERE THE OVERALL WIDTH OF THE RAMP IS A MAXIMUM OF 16 FEET.
- EE THIS DISTANCE SHALL BE EQUAL TO 1/2 THE NORMAL RAMP SECTION.
- FF. LONGITUDINAL SAWED JOINTS AT CENTERLINE SHALL BE REQUIRED FOR ALL RAMP AND LOOP WIDTHS GREATER THAN 16 FEET.
- GG THIS CONTRACTION JOINT SHALL ALWAYS BE PLACED OPPOSITE THE NOSE OF THE RAMP. THE TWO CONTRACTION JOINTS IMMEDIATELY PRECEDING THIS JOINT, DEPENDING ON THE DIRECTION OF PAVING OPERATIONS, SHALL BE EQUALLY DIVIDED, PROVIDED THE SPACING DOES NOT EXCEED THE NORMAL SPACING. SHOULD SPACING BE GREATER THAN NORMAL, AN EXTRA JOINT SHALL BE ADDED AND THE DISTANCE EQUALLY DIVIDED. THE JOINT IMMEDIATELY FOLLOWING THE JOINT THAT IS PLACED OPPOSITE THE RAMP NOSE SHALL BE NORMALLY SPACED.
- HH. SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.
- II. NORMAL SPACING OF CONTRACTION JOINTS INDICATED ON THIS DRAWING ARE TO BE IN ACCORDANCE WITH SPACING INDICATED ON CURRENT STANDARD DRAWING RPN-015.

KENTUCKY	
DEPARTMENT OF HIGHWAYS	
CONCRETE	
PAVEMENT JOINTS	
TYPES AND SPACING	
STANDARD DRAWING NO. RPS-030-04	
APPROVED _____	DATE _____
SUBMITTED _____	DATE _____
DIRECTOR DIVISION OF DESIGN	
STATE HIGHWAY ENGINEER	

EROSION CONTROL

Description: This work consists of locating, furnishing, installing, and maintaining sediment and erosion control best management practices for earth disturbing activity areas and developing a Best Management Practices (BMP) Plan using good engineering practices as required. Furnish and install temporary sediment and erosion control best management practices prior to any earth disturbing activity and permanent erosion control as needed until the project has a formal release. Provide a KEPSC qualified Inspector to make and record inspections of BMP's and areas.

Requirements: Locate, furnish, install, and maintain temporary sediment and erosion control best management practices (BMP) to represent and warrant compliance with the Clean Water Act (33 USC Section 1251 et seq.), the 404 permit, the 401 Water Quality Certification, local government agency requirements, specifications, and other related rules and permits. . In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, State, or local agencies, adhere to the more restrictive laws, rules, or regulations.

Perform all erosion control work in accordance with the Department's Current Standard and Supplemental Specifications, applicable Special Provisions and Special Notes, and Standard and Sepia Drawings, except as hereafter specified. Comply with KYTC Standard Specifications Section 213-WATER POLLUTION CONTROL and Section 212-EROSION CONTROL. Restore all disturbed areas as per KYTC Standard Specifications Section 212.

Materials: All materials shall conform to applicable Sections of the Department's Current Standard and supplemental Specifications, and Standard and Sepia drawings, unless otherwise specified. All materials shall be sampled and tested 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.

Use Seed Mixture as specified in KYTC Standard Specifications Section 212.03.03 for all permanent seeding and protection.

Construction Methods: Sign and apply the BMP Plan in accordance with KYTC Standard Specifications Section 213.03.01 Each BMP plan will be depending on existing conditions at the project site, the type of work to be performed, the construction phasing, and the techniques utilized by the Contractor to complete the work, as approved by the Engineer. The quantity of erosion prevention and sediment control measures required on the project depend entirely on the Contractor's methods for completing the required construction.

The Contractor shall conduct his operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads required to complete all construction. Preserve existing vegetation if not required to be removed by the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, and other erosion control measures in a timely manner and as approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure or entering a stream.

Erosion control measures shall be in place and functioning prior to any disturbance within a drainage area. The Contractor shall be required to remove sediment from silt traps whenever they become ½ full (at the most). As directed by the Engineer, silt fence shall be maintained by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated. Properly dispose of all materials trapped by erosion control devices at sites approved by the Engineer.

After all construction is completed, completely remove all erosion control devices and debris from the construction site, unless otherwise directed by the Engineer. Grade remaining exposed earth (both on and off the Right of Way) as nearly as possible to its original condition, or as directed by the Engineer. Prepare the seedbeds and sow all disturbed areas in accordance with KYTC Standard Specifications Section 212.03.03

Measurement: Contrary to the Standard Specifications which states the Department will measure all work and/or items for erosion/water pollution control; all work and items necessary for preparing and maintaining a BMP plan and permanent seeding shall be incidental to the bid item: EROSION CONTROL

If EROSION CONTROL BLANKET (Standard Specifications Section 212.03.03 E) or SODDING (Standard Specifications Section 212.03.04) is required, the Bid Item shall be added for the Item required. EROSION CONTROL BLANKET shall be measured as per Standard Specifications Section 212.04.07 and SODDING shall be measured as per Standard Specifications Section 212.04.08.

Payment: Payment at the contract unit price per lump sum shall be full compensation for all materials, equipment, labor and incidentals necessary to complete the work as specified in these notes and the Standard Specifications. The Department will consider payment as full compensation for all work required by this note.

If EROSION CONTROL BLANKET or SODDING is required, payment for these items shall be as per Standard Specifications Section 212.05

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS
I 264

The dimensions shown on the typical sections for pavement and shoulder widths are nominal or typical dimensions. The actual dimensions to be constructed or diamond ground 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 REMOVING EXISTING PAVEMENT MARKERS
ON PORTLAND CEMENT PAVEMENT
I 264**

Before diamond grinding, remove existing Type V snow plowable markers (iron castings) and patch the hole with Partial Depth Repair Material listed in the Special Note for Partial Depth Concrete Pavement Repair. This material can be diamond ground unless otherwise noted by the manufacturer.

Removal of Type V markers will be paid at the contract unit price each, which shall be full compensation for removing the markers and disposing of the castings and any debris. The quantity is estimated by dividing the length of each run of markers by their average spacing, plus one. Actual quantities removed will be verified by the Engineer. Partial Depth Repair Material to repair the resulting recess will be paid for separately.

SPECIAL NOTE FOR BEFORE YOU DIG

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

SPECIAL NOTE FOR REFERENCES TO SPECIAL PROVISION 76

Special Provision 76 has been superseded by the Special Note for Full Depth Concrete Pavement Repair and the Special Note for Partial Depth Concrete Pavement Repair. Apply these notes for any references to Special Provision 76.

**Special Note For Fixed Completion Date and
Liquidated Damages
Jefferson County
Item Nos. 5-2045.00 & 5-2047.00**

Contrary to Section 108.09, Liquidated Damages of \$2,400 per calendar day will be assessed for each day work remains uncompleted beyond the Specified Completion Date. This project has a Fixed Completion Date of May 1, 2010.

In addition to the Liquidated Damages specified in Section 108.09, Liquidated Damages in the following amounts will be charged when a lane or ramp closure remains in place during the prohibited period outlined in the Traffic Control Plan, excluding delays caused by inclement weather:

\$2,500 for the first hour
\$25,000 any additional hour

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.

Guardrail Delivery Verification Sheet

Item Nos. 5-2045.00 & 5-2047.00

<u>Guardrail, End Treatment, Terminal Section or Post Type</u>	<u>Unit</u>	<u>Field Verified Amount</u>	<u>Delivered Amount</u>
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	_____	_____
Timber Guardrail Post	Each	_____	_____
Steel Guardrail Post	Each	_____	_____

Removed guardrail, end treatments, terminal sections, and posts shall be delivered to the Bailey Bridge Yard in Frankfort, KY and shall be neatly stacked in accordance with section 719.03.07 of the standard specifications. Contractor, engineer, and Bailey Bridge Yard representative must all sign off on this sheet before payment may be made.

	Printed Name	Signature	Date
Resident Engineer (or Representative)	_____	_____	_____
Contractor (or Representative)	_____	_____	_____
Bailey Bridge Yard Representative	_____	_____	_____

SPECIAL NOTE FOR BRIDGE REPAIR ITEMS

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

The work items consist of the following: (1) Furnish all labor, material, tools, and equipment; (2) Remove and replace all existing neoprene joint seals; (3) Remove and replace damaged sections of armored edge, including portions of the concrete deck slab and backwall; (4) Clean and patch abutment breastwall where spalled concrete has exposed reinforcing bars; (5) Jack bridge span and reset misaligned elastomeric bearing pad; (6) Fill scour hole under concrete slopewall with flowable fill; (7) Maintain and control traffic; and (8) Any other work specified as part of this contract.

II. MATERIALS.

- A. Class "M" Concrete.** Use either "M1" or "M2". See Section 601. No rapid setting additives are allowed.
- B. Structural Steel.** Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection.
- C. Stud Anchors.** The armored edge stud anchors are ¾" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- E. Epoxy Bond Coat.** See Section 511.
- F. Neoprene Joint Sealers (Compression Seals).** See Section 807 and ASTM D2628.
- G. Epoxy-Sand Slurry.** See Section 804 and 826.
- H. Flowable Fill.** See Section 601.03.03(B)(5).

III. CONSTRUCTION.

- A. Existing Plans.** As an aid to the Contractor, plans of the existing bridges are available from the division of Structural Design upon request. The completeness of the drawings is not guaranteed and no responsibility is assumed by the Kentucky Transportation Cabinet for their accuracy. The existing drawing numbers for these structures are as follows:

<u>Number</u>	<u>Crossing</u>	<u>Number</u>	<u>Crossing</u>
#21365	Curtis Ave. & NS R.R. (mainline)	#21540	Poplar Level Road
#21101	Curtis Ave. & NS R.R. (Durrett Ln.)	#21069	Newburg Road
#21043	Beargrass Creek	#21272	Bardstown Road
#21361	Taylorsville Road	#22032	Breckenridge Lane

- B. Shop Plans.** Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work. New material that is unsuitable because of variations in the existing structure shall be replaced at the Contractor's expense.
- C. On-Site Inspection.** The Contractor shall make a thorough inspection of the project site prior to submitting a bid and shall be thoroughly familiarized with the existing conditions, the scope of the work, and the difficulties allied to the concrete removal and retrofit operations. The Contractor shall consult the Engineer on discrepancies of

importance between the existing conditions and the plan intent. The submission of bid will be considered as evidence that such an examination has been made. Any claims resulting from site conditions will not be honored by the Department of Highways.

- D. Phase Construction.** All work is to be coordinated with the project maintenance of traffic. Perform bridge joint repairs and breastwall abutment repairs during lane closures provided for the roadway pavement rehab or as directed/approved by the Engineer.
- E. Remove Existing Preformed Neoprene Joint Seals.** Remove all existing, preformed neoprene joint seals for each bridge. During removal, inspect the existing steel retainer bar along the entire length of armored edge and install new retainer bars at all sections where existing bar is missing or loose, using a method approved by the Engineer. Also, remove any debris that has fallen through the joints or as directed by the Engineer.
- F. Remove Existing Concrete and Damaged Armored Edge.** Remove damaged sections of armored edge for each bridge where damage is present. Damaged sections to be removed are defined as having cracks in the steel angle where either (1) the horizontal leg of the angle is missing entirely or (2) relative vertical displacement of the horizontal leg is visible across a crack.

Remove damaged sections of armored edge in minimum lengths of 4' feet. Use the following guidelines to avoid leaving short sections of existing armored edge between repair segments: If multiple damaged sections exist along a single steel angle and the gap between the points of damage is no more than 12' feet, replace entire length of armored edge between damaged sections. Remove armored edge such that limits of removal are greater than 1' foot and less than 4' feet beyond the nearest damaged section.

Remove damaged armored edge, using methods approved by the Engineer, so that the remaining, undamaged armored edge at the limits of removal have clean/straight lines suitable for welding to the new section to be installed. If the anchor straps for the damaged armored edge extend below the vertical limits of concrete removal shown in the detail, cut the straps at the concrete interface and leave any remaining portion of the straps in place.

To allow for removal/replacement of damaged sections of armored edge, existing deck slab and backwall sections shall be carefully removed to the lines designated on the plans by drilling, chipping, or other methods approved by the Engineer. Clean and leave all existing steel reinforcing encountered in place. Before removing the designated concrete, sawcut the perimeter to a depth of 1 1/2" inches, using diamond saw blades or an approved equivalent. Sawing shall be dust free. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible. The Contractor shall exercise extreme care during sawing and concrete removal operations not to cut any of the existing steel reinforcing. If an existing bar is accidentally cut, the Contractor shall use the repair method approved by the Engineer at no additional cost.

Only remove concrete on same side of the joint where damage to the armored edge has occurred, in accordance with the limits shown on the attached details. Furthermore, if only one armored edge along either face of the back wall is damaged, the other undamaged, armored edge shall remain in place during concrete removal of the backwall. The contractor shall take care not to damage any portion of the armored edge that is to remain in place, including the steel anchor straps. During concrete removal, if an existing strap is accidentally cut on any portion of armored edge that is to

remain in place, the Contractor shall use the repair method approved by the Engineer at no additional cost.

- G. Place New Concrete and Armored Edges.** The damaged armored edge shall be replaced with the same size of steel angle currently in place. See attached detail for anticipated angle size according to the existing plans. The Contractor shall field verify the angle size before ordering material.

Provide a beveled edge at the ends of the new armored edge, field weld at joints, and grind smooth. Weld procedures shall comply with the techniques specified in the joint Specification ANSI/AASHTO/AWS D1.5 bridge welding code.

Before placing new Class "M" concrete, replace deteriorated or damaged reinforcing as the Engineer directs. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with a two-component epoxy bond coat immediately prior to placing new concrete in accordance with Section 511 and 826. Also see KYTC special note 7S (Structural Adhesives with Extended Contact Time). Immediately prior to placing epoxy bond coat, blast clean all areas of existing concrete and steel to come in contact with new concrete until free of all laitance and deleterious substances that would prevent adhesion of the concrete. The top of deck slab and backwall concrete shall match the grade and cross-slope of the existing roadway surface. The finish of the new Class "M" concrete shall be in accordance with Section 609.

- H. Place New Preformed Neoprene Joint Seals.** Follow the manufacturer's recommendations relative to adhesive application and joint installation, and place in accordance with Section 609.03.04(D). Place the preformed neoprene joint seal in one continuous, unbroken length between gutterlines, or as directed by the Engineer. Seal the ends of the joint seal to prevent the entrance of water and debris. At locations where a transverse joint intersects a longitudinal joint, bonding of the respective neoprene joint seals shall be performed according to the manufacture's recommendations. The preformed compression joint seal shall be a multi-cellular elastomeric profile capable of providing the minimum required movement shown on the attached detail.

- I. Prepare Breastwall Abutment for Concrete Patching Repair.** The Contractor, as directed by the Engineer, shall locate and remove all loose, spalled, or delaminated concrete within 60' feet of the northeast corner of the breastwall abutment for the Poplar Level Road Bridge over I-264. Sounding shall be used to locate delaminated areas.

The outer edges of all areas to be patched shall be saw cut to a depth of 1" inch to provide a straight clean edge for the new concrete patch. The Contractor shall chip out all damaged sections of concrete until there is a minimum 1" inch clearance around the exposed and/or existing reinforcing bar. Unless specifically directed by the Engineer, depth of removal shall be no less than 4" inches and no more than 6" inches. See attached detail for concrete removal limits around areas to receive concrete patching.

Pneumatic hammers heavier than the 35 lb. class shall not be used for any portion of concrete removal. Concrete removal from behind reinforcing steel shall be accomplished by chipping with hand picks, chisels or light duty chipping hammers (not to exceed 15 lb.).

Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. If any undamaged bar is cut, the Contractor shall use the repair method approved by the Engineer at no additional cost.

After concrete removal, the surface to receive concrete patching shall be prepared by abrasive blast cleaning. Abrasive blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete.

Also, all exposed reinforcing steel shall have corrosion products removed by sandblasting, grinding, scraping, or other methods as approved by the Engineer. Reinforcing steel displaying deep pitting or loss of more than 20 percent of cross-sectional area shall be removed and replaced. Intersecting reinforcing bars shall be tightly secured to each other using tie wire and adequately supported to minimize movement during concrete placement.

- J. Place Concrete Repair Patch on Breastwall Abutment.** Use Class “M” high early strength concrete, or an equivalent approved by the Engineer, to patch the prepared regions of the abutment breastwall surface. Refer to the Transportation Cabinet, Division of Materials’ List of Approved Materials for currently-approved materials for vertical and overhead concrete patching.

Place and finish the new concrete in accordance with the manufacturer’s recommendations, as shown on the attached details, or as directed by the Engineer. The Engineer shall approve the Contractor’s method of placing and consolidating the concrete prior to the beginning of this operation. Pneumatically placed concrete is not allowed.

On completion of finishing operation, patched concrete shall immediately be prevented from drying out and cracking by fogging, wetting, and/or any appropriate method approved by the Engineer. Curing shall continue for duration recommended by the product manufacturer.

Quantities given for “Concrete Patching Repair” are approximate. This quantity shall be bid with the contingency that the quantity may be increased, decreased, or eliminated by the Engineer.

- K. Jack Bridge Span and Reset Bearing Pad.** At the west endbent of the Durrett Lane bridge over Curtis Ave, a single elastomeric bearing pad (9”x18”x3”) under a Type III, PPC I-beam has walked out from its original location and is hanging off the pedestal by approximately 50%. See the attached pictures for reference. The bearing pad appears undamaged and shall be reset to its original location in accordance with the following requirements and as directed by the Engineer.

The Contractor must submit a Jacking Plan, stamped by a professional engineer licensed in the State of Kentucky, for review by the Engineer, prior to starting work. The jacking loads shall be applied to the bottom flange of the prestressed beam(s), as close as practical to the endbent. (i.e. the superstructure shall not be jacked from either the concrete diaphragm or the slab.) It is the Contractor’s responsibility to protect the existing concrete slope wall from damage during the jacking operation. The prestressed beam(s) at the west endbent should only be lifted enough to allow for the misaligned bearing pad to be reset, and no more than ¾” inches. At no time shall the differential movement between beams exceed ¼” inch. During the jacking operation, cribbing or falsework shall be provided to prevent the superstructure from dropping due to jack failure. The total estimated dead load to be supported for jacking all four beams at the west end bent is 300 kips. The Contractor’s jacking system shall be designed to support a minimum of 200% of this load.

The bridge shall be closed to traffic during jacking and setting operations. Prior to the road closure, the detour route and signage shall be set as directed and/or approved by the Engineer.

Prior to resetting the misaligned bearing pad, the concrete pedestal shall be properly prepared and then coated with a thin layer of epoxy-sand slurry according to the appropriate requirements found in Section 606.03.10. Application of the epoxy-sand slurry shall be incidental to the cost of resetting the bearing pad.

The bearing pad shall be reset to match the location shown in the original plans. Any other bearing pads that move noticeably during the jacking operations should be reset to their original locations as well. Bearing pad repair work shall be completed prior to starting work on the joint replacement.

After resetting the bearing pad, the end of the prestressed beam, where cracking and spalling has occurred, shall be cleaned and protected from further deterioration. All loose or delaminated concrete shall be removed from the damaged section of the beam. After removal, clean all areas of existing concrete and exposed steel until free of all laitance and deleterious substances and then paint the surface with an approved bituminous material.

- L. Flowable Fill.** Fill void under concrete slopewall at the northwest corner of the I-264 Bridge over Curtis Avenue & NS Railroad. Place flowable fill according the relevant requirements found in Section 601.03.09(C). To prevent escape of flowable fill during pouring, seal and brace toe of concrete slopewall, as required. If flowable fill has not completely filled the void to the level indicated on the attached detail after placing 30 cubic yards, the Contractor will investigate and eliminate the cause of the problem before continuing to pour; the Contractor shall not resume pouring operations without the approval of the Engineer. Ensure that the exposed surface of the flowable fill drains away from the face of the bridge endbent with a 2% minimum slope. If the existing concrete slopewall shifts or cracks during the performance of this work item, the Contractor shall use the repair method approved by the Engineer at no additional cost.
- M. Completion of Construction.** Labor or construction operations required to complete the work items in accordance with this note and referenced documents, but not directly specified, shall be considered incidental to the bid item most appropriate to the work involved. The contractor shall bear full responsibility and expense for any and all damage to the existing structures during the performance of the specified work items, should such damage result from the Contractor's actions. After completion of work, the structure and site shall be left in a condition that is in accordance with Section 104.05. All existing material that is to be removed shall not be reused in the structure and shall become the property and responsibility of the contractor to remove from the project site. The cost of removal shall be incidental to the appropriate bid item.

IV. MEASUREMENT.

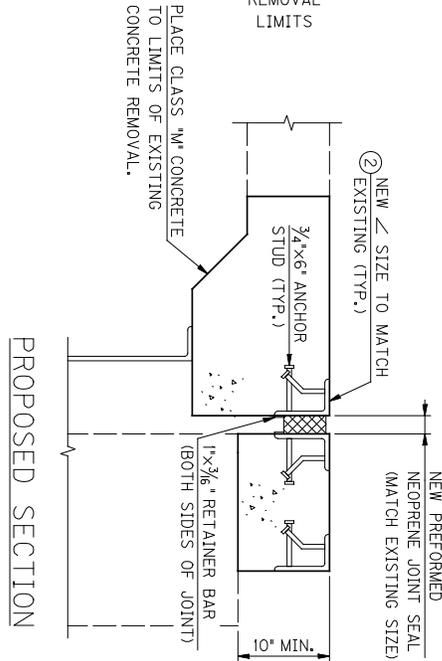
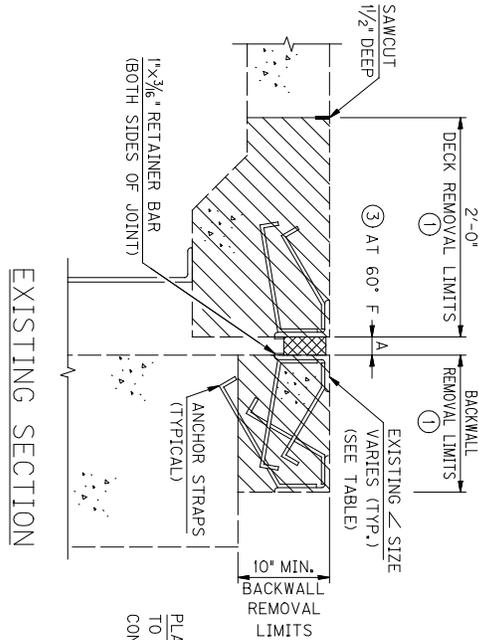
- A. Expansion Joint Replace - 1 ½", 2", 2 ½".** For transverse bridge end joints, the Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint. For longitudinal joints (on Poplar Level Road), the Department will measure the quantity in linear feet along the centerline of the joint from either (1) centerline to centerline of transverse joints at opposite bridge ends or (2) from gutterline to centerline of transverse joint at relevant bridge end.

- B. Armored Edge for Concrete.** The Department will measure this quantity as a lump sum unit and will consider it to include all work necessary for the completion of the work specified.
- C. Concrete Patching Repair.** For the specified region of the breastwall abutment, the Department will measure the quantity of completed and approved repair patch in square feet. The quantity shall be the actual area of the exposed surface of all accepted patches, irrespective of the depth or thickness of the patch.
- D. Jack and Support Bridge Span.** The Department will measure this quantity as a lump sum unit and will consider it to include all work necessary for the completion of the work specified.
- E. Reset Bearing Pad.** The Department will measure this quantity as a lump sum unit and will consider it to include all work necessary for the completion of the work specified.
- F. Flowable Fill.** The Department will measure the quantity in cubic yards actually placed, not to exceed 30 cubic yards without approval from the Engineer.

V. PAYMENT.

- A. Expansion Joint Replace - 1 ½", 2", 2 ½".** Payment for this work item at the contract unit price per linear foot is full compensation for the following: (1) removing existing neoprene joint seal; (2) cleaning debris from joint; (3) furnishing and installing new retainer bars to replace damaged sections; (4) furnishing and installing new neoprene joint seals; and (5) all incidental items necessary to complete the work.
- B. Armored Edge for Concrete.** Payment for this work item at the lump sum price is full compensation for the following: (1) removing specified existing materials; (2) furnishing and installing the new armored edges and concrete; (3) and all incidental items necessary to complete the work.
- C. Concrete Patching Repair.** Payment for this work item at the contract unit price per square feet is full compensation for the following: (1) Furnishing all labor, materials, tools, and equipment; (2) Preparing the existing surface of the breastwall abutment for concrete patching; (3) Repairing existing reinforcing bars, as needed; (4) placing, finishing, and curing new concrete patches; and (5) all incidental items necessary to complete the work.
- D. Jack and Support Bridge Span.** Payment for this work item at the lump sum price is full compensation for the following: (1) Furnish all labor, material, tools, and equipment; (2) jack and temporarily support the beam(s) as required to allow for realignment of bearing pad; (3) Maintain and control traffic; (4) and all incidental items necessary to complete the work.
- E. Reset Bearing Pad.** Payment for this work item at the lump sum price is full compensation for the following: (1) Furnish all labor, material, tools, and equipment; (2) Apply epoxy-sand slurry and reset the misaligned bearing pad; (3) clean and protect the end of prestressed beam over the bearing; (4) and all incidental items necessary to complete the work.
- F. Flowable Fill.** Payment at the contract unit price is full compensation for furnishing and placing flowable fill as specified in this note.

The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.



JOINT REPAIR DETAILS

NOTE: REMOVE/REPLACE EXISTING NEOPRENE JOINT SEAL, HATCHED AREAS OF CONCRETE AND DAMAGED ARMORED EDGE, WITHIN THE LIMITS SPECIFIED BY THESE DETAILS AND THE *SPECIAL NOTE FOR BRIDGE REPAIR ITEMS*.

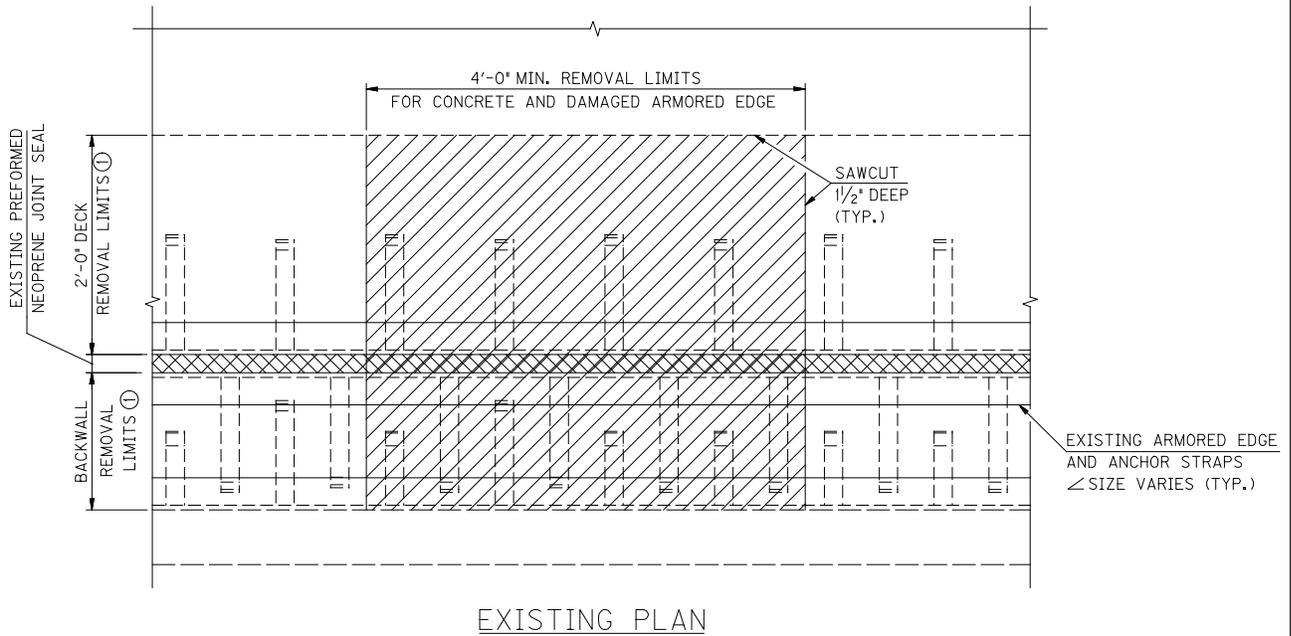
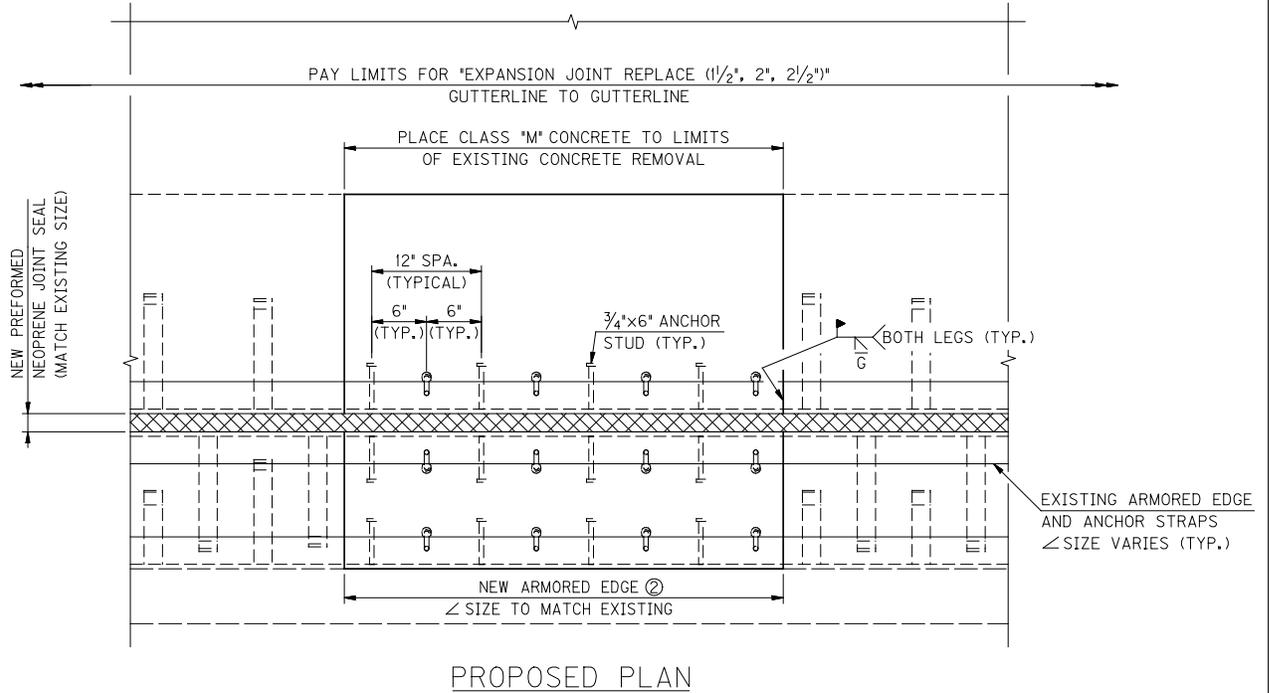
- NOTATIONS:
- ① ONLY REMOVE CONCRETE ON SAME SIDE OF JOINT WHERE DAMAGE TO ARMORED EDGE HAS OCCURRED. ALL EXISTING REINFORCING BARS SHALL REMAIN IN PLACE.
 - ② PROPOSED SECTION SHOWS ALL THREE EXISTING STEEL ANGLES BEING REPLACED. THIS IS NOT THE CASE IN ALL LOCATIONS. INTACT EXISTING STEEL ANGLES ARE TO REMAIN IN PLACE. SEE *SPECIAL NOTE FOR BRIDGE REPAIR ITEMS*.
 - ③ EXISTING PERFORMED NEOPRENE JOINT SEAL (SEE TABLE FOR JOINT SIZE)

CROSSING	ESTIMATED REPAIR QUANTITIES			
	PREFORMED NEOPRENE JOINT SEAL (LIN. FT.)	ARMORED EDGE (LIN. FT.)	15x3x3/8	16x3/2x5/16
CURTIS AVE. AND NS R.R.*	A = 1/2"	A = 2"	A = 2 1/2"	4
POPLAR LEVEL ROAD	-	490	-	4
NEWBURG ROAD	191	749	-	4
BEARGRASS CREEK	-	-	362	-
BARSTOWN ROAD	254	147	-	80
TAYLORSVILLE ROAD	-	557	-	-
BRECKENRIDGE LANE	-	-	185	-

NOTE: JOINT AND ANGLE SIZE BASED ON EXISTING PLANS. CONTRACTOR SHALL FIELD VERIFY. NEW JOINT SEALS SHALL ACCOMMODATE REQUIRED MOVEMENT OF 1/2" LESS THAN "A" VALUE SHOWN. * INCLUDES THE QUANTITIES FOR I-264 AND THE DURRETT LANE BRIDGE

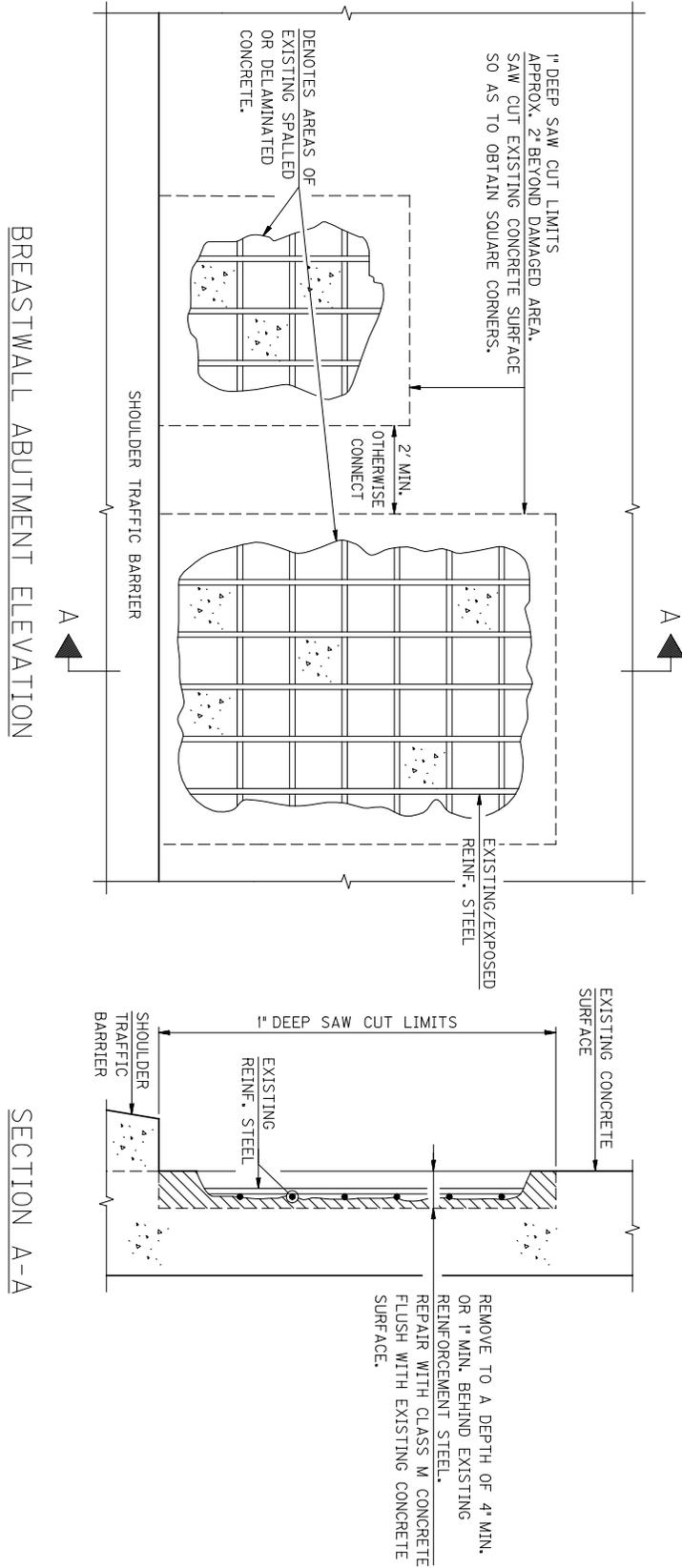
NOTATIONS:

- ① ONLY REMOVE CONCRETE ON SAME SIDE OF JOINT WHERE DAMAGE TO ARMORED EDGE HAS OCCURRED. ALL EXISTING REINFORCING BARS SHALL REMAIN IN PLACE.
- ② PROPOSED PLAN SHOWS ALL THREE EXISTING STEEL ANGLES BEING REPLACED. THIS IS NOT THE CASE IN ALL LOCATIONS. INTACT EXISTING STEEL ANGLES ARE TO REMAIN IN PLACE. SEE "SPECIAL NOTE FOR BRIDGE REPAIR ITEMS".



JOINT REPAIR PLAN VIEW

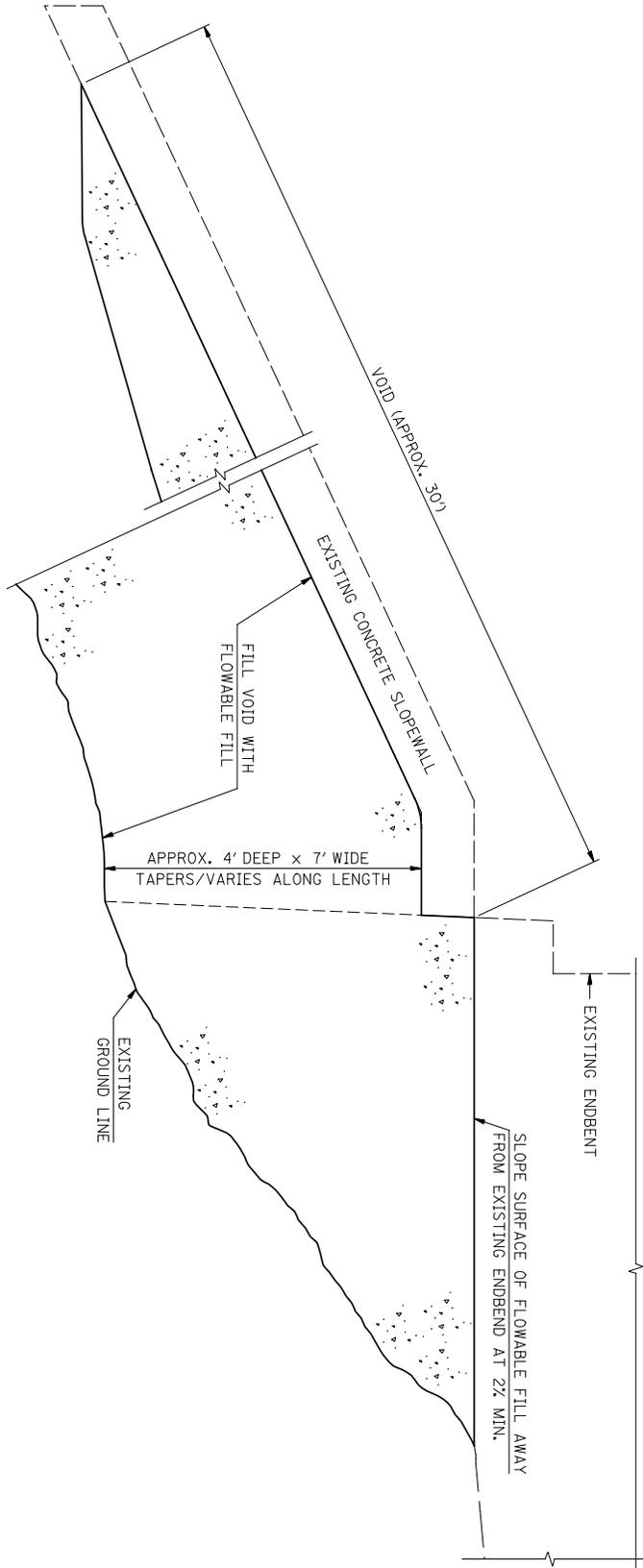
NOTE: REMOVE/REPLACE EXISTING NEOPRENE JOINT SEAL, HATCHED AREAS OF CONCRETE AND DAMAGED ARMORED EDGE, WITHIN THE LIMITS SPECIFIED BY THESE DETAILS AND THE "SPECIAL NOTE FOR BRIDGE REPAIR ITEMS".



REMOVAL LIMITS FOR CONCRETE PATCHING REPAIR

(BREASTWALL ABUTMENT - NORTHEAST CORNER OF POPULAR LEVEL ROAD OVER I-264)

SEE *SPECIAL NOTE FOR BRIDGE REPAIR ITEMS*



SCOUR UNDER EXISTING SLOPEWALL

(NORTHEAST BRIDGE CORNER, I-264 OVER CURTIS AVE. AND NS RAILROAD)

SEE "SPECIAL NOTE FOR BRIDGE REPAIR ITEMS"

I-264 OVER CURTIS AVE. & NORFOLK SOUTHERN RAILROAD



Scour Hole Under Concrete Slopewall



Inside Scour Hole Under Concrete Slopewall

DURRETT LANE OVER CURTIS AVE. & NORFOLK SOUTHERN RAILROAD



**Damaged
Areas**



**Reset
Bearing
Pad**

≈ 2'-6"

Rev.12/08

DIVISION OF PLANNING

SPECIAL NOTES FOR INSTALLATION OF TRAFFIC COUNTING INDUCTANCE LOOPS AND AXLE SENSORS

I. DESCRIPTION

Except as specified in these notes, perform all work according to the Department's Current Edition Standard Specifications, applicable Special Provisions and Special Notes, Sepia and Standard Drawings, and the drawings elsewhere in this proposal. Article references are to the Standard Specifications.

Furnish all materials, labor, equipment, and incidentals for the following work: (1) Maintain and control traffic; (2) install inductive loops; and (3) all other work required by the Specifications, Standard Drawings, Special Notes and the drawings in the proposal. The details of the project will be supplied in addition to these Special Notes.

II. MATERIALS

The Department will sample and test all materials according to Department's Sampling Manual. Have all 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. All materials shall be approved prior to being utilized. The Contractor shall submit for approval five (5) copies of descriptive literature, drawings, and any requested design data for the materials he proposes to use. No substitutions for approved materials will be made without the written approval of the Engineer.

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

B. Junction Box Type 6 in. x 6 in. x 4 in. The junction box shall have minimum inside dimensions of at least 6 inches high by 6 inches wide by 4 inches deep, made of a UV stabilized nonmetallic material (plastic) or non-rusting metal, and be weatherproof (NEMA 4X enclosure). It shall have a removable replaceable door with a continuous durable weatherproof gasket between the body and overhanging door to ensure a watertight seal. The door shall be hinged with stainless steel screws, hinge(s) and pin(s). The door shall also have a stainless steel padlockable latch on the side opposite the hinge(s). An approved enclosure is the Hubbell-Wiegmann model VJ606HWPL1.

C. Junction Box Type 10 in. x 8 in. x 4 in. The junction box shall have minimum inside dimensions of at least 10 inches high by 8 inches wide by 4.6 inches deep, made of a UV stabilized nonmetallic material (plastic) or non-rusting metal, and be weatherproof (NEMA 4X enclosure). It shall have a removable replaceable door with a continuous durable weatherproof gasket between the body and overhanging door to ensure a watertight seal. The door shall be hinged with stainless steel screws, hinge(s) and pin(s). The door shall also

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 2 of 17

have a stainless steel padlockable latch on the side opposite the hinge(s). An approved enclosure is the Hubbell-Wiegmann model VJ1008HWPL1.

D. Junction Box Type A. The junction box Type A shall be constructed of a fiberglass reinforced polymer concrete, Quazite PC Style, or approved equal. It shall have nominal inside dimensions of 13 inches wide by 24 inches long by 18 inches deep with an open bottom. The removable cover shall be attached with a minimum of two 3/8-inch stainless steel hex bolts and washers.

E. Junction Box Type B. The junction box Type B shall be constructed of a fiberglass reinforced polymer concrete, Quazite PC Style, or approved equal. It shall have nominal inside dimensions of 11 inches wide by 18 inches long by 12 inches deep with an open bottom. The removable cover shall be attached with a minimum of two 3/8-inch stainless steel hex bolts and washers.

F. Junction Box Type C. The junction box Type C shall be constructed of a fiberglass reinforced polymer concrete, Quazite PC Style, or approved equal. It shall have nominal inside dimensions of 24 inches wide by 36 inches long by 30 inches deep with an open bottom. The removable cover shall be attached with a minimum of two 3/8-inch stainless steel hex bolts and washers.

G. Cabinet Type G. A controller cabinet Type G shall be constructed of type 5052-H32 sheet aluminum with a minimum thickness of 0.125 inches. The cabinet shall meet or exceed the industry standards set forth by the UL 50 and the National Electrical Manufacturer's Association (NEMA) 3R. The cabinet shall have a dimension of 41 inches high by 25 inches wide by 16 inches deep. The cabinet shall include kits for a back panel and two shelves. The cabinet shall be designed with a sloped top to prevent the accumulation of water on its top surface. The single door opening shall be double flanged on all four sides, hinged on the right side, equipped with a three-point latching mechanism, and include a door restraint. The door shall be equipped with a Corbin tumbler #2 lock. The cabinet shall be equipped with two adjustable "C" mounting channels on both side and back walls to allow for versatile positioning of shelves. Manufacturer's shop drawings shall be submitted demonstrating details of equipment housing and installation. If electrical service is specified, a 120-volt GFCI AC duplex receptacle shall be provided in the cabinet.

An approved source is provided below. Other approved equal cabinets may be furnished if approved by a representative of the Central Office, Division of Planning. To be considered approved equal, the cabinet shall meet the above requirements and match the specified detailed dimensions.

Econolite Control Products.
P.O. Box 6150
3360 E. La Palma
Anaheim, California 92806-2856

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 3 of 17

H. Galvanized Steel Cabinet. The cabinet shall be a hinged cover NEMA Type 3R medium enclosure, constructed of 16 or 14 gauge galvanized steel, and have inside dimensions of 20 inches high by 20 inches wide by 8 inches deep. This shall be the standard size that contractors shall place their bids on. The cabinet shall meet the industry standards set forth by the Underwriters Laboratories Inc. (UL) 50 and the National Electrical Manufacturers Association (NEMA). The finish shall consist of an American National Standards Institute (ANSI) 61 gray polyester powder finish inside and out over the galvanized steel. The cabinet shall have the following features:

- Drip shield top and seam-free sides, front, and back, to provide protection in outdoor installations against rain, sleet, and snow.
- 16 gauge galvanized steel continuous stainless steel pin.
- Cover fastened securely with captive plated steel screws.
- Hasp and staple provided for padlocking.
- No gaskets or knockouts.
- Back plate mounted inside the cabinet for terminal strip installation.

An approved source is provided below. Other approved equal cabinets may be furnished if approved by a representative of the Central Office, Division of Planning. To be considered approved equal, the cabinet shall meet the above requirements and match the specified detailed dimensions.

Hoffman Engineering Co.
World Headquarters
900 Ehlen Drive
Anoka, Minnesota 55303-7504

I. Wood Post. The wood post shall be 4 inches by 4 inches by 8 feet long, and is pretreated to conform to the American Wood Preservers' Association (AWPA) C-14. All wood posts shall be sawed on all four sides, having both ends square, and conform to the dimensions specified. The wood post is described in detail in Section 820.01 of the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Current Edition.

J. Conduit. Conduit shall be rigid steel waterproofed conduit unless otherwise specified. All conduits shall be galvanized inside and out and shall conform to the Underwriters' Laboratories (UL) requirements for rigid metallic conduit. IMC will not be accepted. Furnish all conduit fittings, bodies, boxes, joints, couplings and mounting hardware.

K. Loop Wire. All loop wire shall be plainly marked in accordance with the provisions of the current editions of the National Electric Code (NEC). The wire shall be 14-gauge single conductor, insulated in polyethylene (PE) with a 0.004-inch thick nylon coating, and enclosed in a 0.030-inch thick PE tube jacket. The wire shall meet the requirements of the International Municipal Signal Association (IMSA) Specification No. 51-7- latest edition. Any other wire shall be of appropriate size and type per the NEC and Section

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 4 of 17

834.01 Wiring of the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Current Edition.

L. Cable No. 14/1 Pair. Cable No. 14/1 pair or loop lead-in cable shall be 14 AWG, stranded, paired conductors, electrically shielded and shall conform to IMSA 19-2. All cable shall be plainly marked in accordance with the provisions of the National Electric Code.

M. Traffic Loop Encapsulant. The traffic loop encapsulant shall consist of a one-part polyurethane as described in Section 835.06 of the Kentucky Transportation Cabinet, Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition.

N. Seeding and Protection. Use seed mixture No. I per Section 212-Erosion Control of the Department's Current Edition Standard Specifications for Road and Bridge Construction book.

O. Electrical Service. The contractor shall initiate a work order for the installation of electrical service to the power site. A representative from the Division of Planning and the local utility company shall be consulted prior to choosing an exact location for the pole. The contractor shall be responsible for clearing the right-of-way for the electrical service drop. The electrical service shall be a minimum 60-ampere, which is capable of supplying 120 volts or 240 volts to the electronics. The installation and materials specified in the construction notes below, shall be made incidental to the bid item established for electrical service. A 120-volt GFCI AC duplex receptacle shall be provided in the cabinet. Contractor is responsible for correct size and type of wire. Contractor is responsible for obtaining any and all electrical inspections, memberships, meter base and any other requirements by the utilities serving the installation and pays all fees required.

P. Piezoelectric Sensors. The sensor shall consist of a metal strip 0.260" wide x 0.063" thick; ± 0.005 " and be furnished in the specified lengths. The sensor shall include a 100-foot electrical coax-cable connected to one end. The coax-cable shall be RG 58 type with an underground/direct burial rated outer jacket. The OD of the cable is 0.187". The nominal capacitance of the cable is 27 pF/ft. Piezo lead-in cables are to be run splice free to their cabinets. Many installations exceed the 100-foot length so the piezo should be ordered with a lead-in of appropriate length. Standard lead-ins can be ordered from 100 to 500 feet in 50-foot increments. The manufacturer should be contacted regarding longer distances.

- 1. Piezoelectric Sensor: Roadtrax BL Class I or Approved Equal.** Furnish Class I Piezoelectric Sensor to be used to collect truck weigh-in-motion data. Class I sensors are typically furnished in 6- or 11-foot lengths. See Notes and Estimate of Quantities for sensor type and length. One installation bracket for every 6 inches of sensor length shall also be supplied.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 5 of 17

The vendors listed below are known distributors of the Roadtrax BL Class I sensors. Other approved equal sensors may be furnished if approved by a representative of the Central Office, Division of Planning. To be considered approved equal, the sensors shall meet the above requirements and match the specified detailed dimensions.

DIA-L Associates
P. 3302 Aquia Drive
Stafford, VA 22554

Measurement Specialties, Inc.
80 Little Falls Road
Fairfield, NJ 07004

International Road Dynamics, Inc.
702 43rd Street East
Saskatoon, Saskatchewan
Canada, S7K3T9

Grout material shall display fast cure times; tack free in 10 minutes and open to traffic in 40 minutes with full cure within an hour. Material shall have excellent adhesion to concrete and asphalt. It should display excellent chemical resistance, water insensitivity, and thermal stability at high and low temperatures. Ample encapsulation material shall be supplied for each sensor for its proper installation. Approved encapsulation material by the piezo manufacturer includes AS475 Axle Sensor Grout or approved equal. This is a durable two-part resin-based grout suitable for asphalt and concrete applications having the following typical physical properties:

Compressive Strength (psi)	ASTM D638	5000 min.
Water Absorbtion	ASTM D570	0.3% max
Wear Resistance	ASTM D4060	CS10 wheel, 1000 gm load 1000 cycles, 186 mg loss

The vendors listed below are known distributors of the approved grout.

DIA-L Associates
P. 3302 Aquia Drive
Stafford, VA 22554
(540) 659-2264

Measurement Specialties, Inc.
80 Little Falls Road
Fairfield, NJ 07004

PAT Traffic Control Corporation
1665 Orchard Drive
Chambersburg, PA 17201

International Road Dynamics, Inc.
702 43rd Street East
Saskatoon, Saskatchewan
Canada, S7K3T9

III. CONSTRUCTION METHODS

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

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 6 of 17

Once 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 their concerns and answer any questions that the contractor may have before beginning the work. Planning shall also be notified two weeks before work pertaining to these specifications begins to ensure their personnel are present during sensor installation and once the work has been completed so that their representative can perform a final inspection. The Division of Construction then reviews Planning's final inspection report and determine whether the work is in compliance with the specifications before awarding payment to the contractor.

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

B. Junction Box Type 6" x 6" x 4" or 10" x 8" x 4" (as noted). The contractor shall stub the rigid steel conduit to the junction box so the bottom of the box is approximately 18" above the ground. The junction box shall be located at or beyond the shoulder and mounted on the side of a post approximately 3 feet beyond the guardrail post using banding material or other appropriate mounting hardware with the hinge side up. See Figures 2a and 2b for additional details. Leave approximately 18" of slack lead-in wire coiled inside the junction box. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

C. Junction Box Type A (or B or C). Install the Junction Box Type A near the edge of pavement and flush with the ground level (see Figure 3). Place roughly 18 inches of No. 57 aggregate underneath the junction box Type B to allow drainage. Extend the loop lead-in wires splice-free to the cabinet. Run the wire from the junction box Type A through the conduit at a minimum depth of 6 inches. Stub the conduit up into the junction box Type A from its base to accommodate the lead-in wires. Leave at least 2 feet of slack lead-in wire coiled inside the junction box Type A. The conduit fittings, backfilling, and aggregate shall be incidental to the junction box Type A. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

D. Cabinet Type G. Locate the cabinet sufficiently beyond the roadside by determining the minimum clear zones in accordance with the "Roadside Design Guide". Place a concrete foundation of appropriate size for mounting the cabinet. The cabinet shall be mounted on the concrete base such that the bottom of the cabinet is 27" above the ground. The door of the cabinet shall open away from traffic. Fasten the cabinet to the foundation using anchor rods and caulk the gap between the cabinet and the base. Stub rigid conduit up into the cabinet from its base. Install an extra 1 1/4" conduit to be stubbed out in the bottom of the cabinet and run out 2 feet from the concrete base and plugged with duct seal or taped shut with electrical tape toward the roadway for future use. An 8' copper clad ground rod shall be driven into the soil and bonded to the rigid conduit via #4 solid copper wire and ran through the concrete and up into the cabinet. A 3/4" rigid steel

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 7 of 17

conduit shall be stubbed up into the cabinet and run 2 feet up the electrical service pole and terminated to a ¾" weatherhead. This conduit shall be run in the same ditch as the electrical service. If electrical service is not provided as an item in the contract, the ¾" rigid steel conduit shall be run out 2 feet from the concrete base and plugged with plumbers putty or taped shut with electrical tape. The location of the plugged end shall be marked with a wooden stake and labeled "¾ in. conduit end" (see Figure 8). A 120-volt, 20-amp GFCI AC duplex receptacle shall be provided in the cabinet.

Leave at least 5 feet of slack lead-in wire in the cabinet. Include the following major items as incidental to the cost of the cabinet: concrete foundation, anchor rods, ground rod, #4 solid copper wire, bonding clamps, and caulking. The Division of Planning will supply additional harnesses and do final connections inside the cabinet. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

E. Install Base Mount Enclosure. Locate the cabinet sufficiently beyond the roadside by determining the minimum clear zones in accordance with the "Roadside Design Guide". For this project, a base mount Model 170 Controller Cabinet, without anchor bolts, will be State-furnished. The contractor shall construct each cabinet foundation as shown on the plans per the attached Figures 9a and 9b, "Base Mounted 170 Cabinet Detail", (including furnishing and installing anchor bolts). Contractor shall install the cabinet on the concrete base such that the doors of the cabinet open away from traffic (hinges are away from traffic), and shall make all field wiring connections to the sensors, electrical and telephone services (as applicable). Fasten the cabinet to the foundation using anchor rods and caulk the gap between the cabinet and the base. Stub rigid conduit up into the cabinet from its base. Install an extra 1 ¼" conduit to be stubbed out in the bottom of the cabinet and run out 2 feet from the concrete base and plugged with duct seal or taped shut with electrical tape toward the roadway for future use. An 8' copper clad ground rod shall be driven into the soil and bonded to the rigid conduit via #4 solid copper wire and ran through the concrete and up into the cabinet. Two 1" rigid steel conduits shall be stubbed up into the cabinet, one for electrical service and one for telephone service (whether installed at this time or in the future). They shall be run a minimum of 2 feet up the electrical service pole and/or telephone source and terminated to 1" weatherheads. These conduits shall be run in the same ditch if possible. If electrical service is not provided as an item in the contract, the 1" rigid steel conduit shall be run out 2 feet from the concrete base and plugged with plumbers putty or taped shut with electrical tape. The location of the plugged end shall be marked with a wooden stake and labeled "1 in. conduit end". A 120-volt, 20-amp GFCI AC duplex receptacle shall be provided in the cabinet.

Leave at least 6 feet of slack sensor lead-in wire in the cabinet. Include the following major items as incidental to the cost of this bid item: concrete foundation, anchor rods and associated hardware, ground rod, #4 solid copper wire, bonding clamps, caulking, electrical material and connections (if applicable). The Division of Planning will supply the cabinet, additional harnesses and do final sensor connections inside the cabinet.

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 8 of 17

Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or other sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

F. Galvanized Steel Cabinet. The contractor shall determine the amount of clearance required from the road to the cabinet for each specific station location. The "Roadside Design Guide", developed by the American Association of State Highway Officials (AASHTO), shall be used as a tool to determine roadside safety based on design and speed limit. The contractor and Planning shall discuss and resolve any conflicts in the Pre-Construction meeting that might arise from following the station descriptions of the Location Table.

Use terminal strips on the back plate with a minimum of eight terminals each and 7/16-inch spacing (center to center) to mount inside the cabinet in order to connect the lead-in wires to the cable assemblies. Use screw type terminal strips to accommodate wire with spade-tongue ends. Allow for at least 20 inches of slack lead-in wire in the cabinet before connecting them to the terminal strip. Wires connected to the terminal strips shall have insulated, solderless, spade tongue terminals of correct wire and stud size. Wires shall be labeled correctly. See Location Drawing and Wiring Table.

Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

G. Wood Post. Set the treated-wood post 3 feet below the ground and place the backfill material in the hole, compacting until flush with the existing earth. Mount the cabinet to the post using 1/4" x 2 1/2" galvanized lag bolts at the top and bottom of the cabinet. The base of the cabinet shall be 4 feet above ground level. Stub the rigid steel conduit up into the base of the cabinet. Affix the conduit to the post using two conduit straps, a maximum of 18" on-center, and 1/4" x 2 1/2" galvanized lag bolts. Cabinet door shall open facing away from traffic (see Figure 7).

H. Conduit. Rigid steel waterproofed conduit encasement shall be provided for all conductors where conductors run to a junction box or cabinet. All conduit installations shall conform to the provisions of the NEC, except where directed otherwise. Bonded slip joints will be permitted for joining rigid conduit to the junction box or cabinet. Where a standard coupling cannot be used, an approved threaded union coupling shall be used.

All conduit ends shall be reamed to remove burrs and sharp edges. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with a 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.

Conduit that will 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

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 9 of 17

traffic shall be laid to a minimum depth of 6 inches below grade. All conduit openings shall be waterproofed with a flexible, removable sealant, including those ending in junction boxes and cabinets. This shall be accomplished using duct seal, or plumber's putty, by working it around the wires and then extending it 1 inch into the end of the conduit. After the conduit has been installed and before the backfilling is started, the conduit installation shall be inspected and approved by the Engineer. In backfilling trenches, the backfill material shall be placed and compacted in lifts of 9 inches or less. Any area disturbed as a result of the contractor's operations shall be restored to the satisfaction of the Engineer.

I. Wiring. All wiring shall conform to the provisions of the NEC unless otherwise shown on the plans. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing Figure 1 for sensor numbers to be placed on all lead-ins. All wiring shall be taken to a cabinet or junction box. Leave at least 2 feet of "slack" lead-in wire inside each Type B junction box and steel cabinet, a minimum of 4 feet of wire inside the Type G cabinet and a minimum of 6 feet of wire inside the base mounted Type 170 cabinet.

J. Splicing. Sensor lead-in cable lengths for each sensor shall allow sufficient but not excessive slack for splicing connections. All splices shall conform to the provisions of the NEC unless otherwise shown on the plans. Loop lead-in wire splices to shielded pair cables shall be twisted and soldered. Other splices shall be twisted and soldered or made with mechanical connectors of a type approved by the Engineer. Splices for loop wire shall be protected by either heat shrink tubing or a double spiral wrapping of vinyl electrical tape. For splicing home-run coax cable to the sensor's lead-in cable, the same coax cable, supplied by the manufacturer, shall be used. For coax-cable splices, the contractor shall provide kits (3M Scotchcast 3832 Buried Service Wire Encapsulation Kit or equal) to protect them. All splices are to be made in junction boxes unless approved by a representative of the Division of Planning.

K. Loops. A location table is furnished in the Supplemental Notes, along with an estimate of quantities, to display the approximate location for loop installation in the existing pavement. The contractor and a representative of Planning will verify the precise location on site. The contractor shall be careful to avoid expansion joints and pavement sections where potholes, cracks, or any other roadway flaws exist. This will not only facilitate installation of the equipment, but also will increase the accuracy and service life span of the sensors.

There shall be a minimum of 6 feet between loops in adjacent lanes for 12-foot wide lanes. Unless indicated otherwise, loops in the same lane shall be spaced 16 feet from leading edge to leading edge (see Figure 6). All loop dimensions shall be 6 feet by 6 feet square unless otherwise indicated by the Location Drawing. Center and mark each loop in the lane such that its sides are parallel and perpendicular to the direction of traffic. Make the saw-cut for the loop 1/4-inch wide and at a depth such that the top loop wire is

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 10 of 17

a minimum of 1 inch below the surface of rigid (PCC/Concrete) pavement or 3 inches below the surface of asphalt pavement. Drill a 1.5" hole at all four corners of the loop to prevent sharp bends in the wire (see Figure 4).

Make the saw-cut for the home run slot 1/4 inch wide. Since it may contain several lead-in wires, the depth should be such that the top lead-in wire is a minimum of 1 inch below the surface of rigid (concrete) pavement or 3 inches below the surface of bituminous (asphalt) pavement. Depending on the number of road sensors at a particular site, the home run slot will gradually need to be cut deeper as you approach the shoulder in order to maintain the minimum depth for the top lead-in wire and directly enter the buried conduit (6 inch depth).

Clean the mud, debris, water, and loose particles from the slot, roadway and surrounding areas. A high-pressure washer shall be used to wash the area followed by clean (oil free) compressed air.

Measure out the appropriate length of loop lead-in wire to allow slack in the final cabinet or junction box. Insert the loop wire into the loop slot for four rotations (see Figure 5). Push the wire in with a wooden stick, such as a paint stir stick or other blunt wooden object. If the wire insulation is broken, apply heat shrink tubing or a double wrapping of vinyl electrical tape to protect from corrosion. Extend the loop lead-in wire splice-free to the junction box or cabinet. Exceptions to this shall be considered on a case-by-case basis and must be approved by the Engineer. If splices cannot be avoided, every effort shall be made to locate them in a junction box. If loop lead-in cable (Cable No. 14/1 Pair) is specified, loop wires shall be twisted and run to the nearest type Junction Box and the wires twisted and soldered to the lead-in cable. The lead-in cable shall then be run splice free to the cabinet ensuring that extra cable is left in each subsequent junction box that it may be run through as well as the cabinet. All wires and cables shall be labeled in each junction box and cabinet.

Twist each pair of loop lead-in wires, exclusive of shielded coax-cable, with three to five turns per foot before placement into the conduit, junction box, and cabinet. Do not twist different pairs of loop wire together. Once the loop wire is installed in the roadway, apply loop encapsulant by allowing the material to flow slowly into the saw-cut and settle until level with the road surface. Every attempt should be made to alleviate air pockets and low spaces should be refilled. Any excess loop encapsulant shall be cleaned from the roadway via squeegee, etc. to help alleviate tracking. The loop encapsulant shall be incidental to the bid item "Loop Saw Slot and Fill".

Loops shall be cut in the surface asphalt course. They shall not be installed between the intermediate and surface courses, unless approved by the Central Office, Division of Planning Equipment Branch.

All loop inductance readings shall be between 100 and 300 microhenries. The loop inductance between two loops in the same lane shall be within 20 microhenries of each other. Inductance loop conductors shall test free of shorts and unauthorized grounds.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 11 of 17

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.

L. Electrical Service. A treated-wood service pole, per Section 820 of the Department's Current Edition Standard Specifications, with a 20-foot minimum length and a 6- to 12-inch diameter, or approved equal, is to be furnished by the Contractor. Install the electrical service pole adjacent to the cabinet at a depth of at least 4 feet while maintaining a 12-foot minimum clearance for the electrical service drop. Compact the backfill material to support the electrical service drop without leaning. Install an appropriate pole support guy wire and anchor if necessary. Install rigid conduit up the length of the pole with three separate insulated conductors (No. 4 copper wire) in the conduit and a weatherhead at the top.

Space the conduit straps 30 inches apart and leave 24 inches of cable for the drip loop. Install a meter-base and a disconnect panel with a 20-ampere circuit breaker inside. A 120-volt, 20-amp GFCI AC duplex receptacle shall be provided in the cabinet. A manufactured weatherproof hub connector is required to connect the meter-base to the disconnect panel. Do not use service entrance cable inside the conduit. The conduit from the disconnect panel is required to be at a depth of 6 inches below grade. Install a 5/8-inch by 8-foot ground rod below the finished grade. Extend the ground wire through a separate hole in the disconnect panel and clamp to the ground rod. Install a 1" rigid conduit to 2 feet above ground level and install a weatherhead at the top opening. This conduit shall be run to and stubbed up into the Cabinet. The conduit shall be attached to the pole at a minimum of 2" from ground level and 2" from the weatherhead.

M. Piezoelectric Sensor, Roadtrax BL Class I or Approved Equal. Determine where on the roadway the piezoelectric sensor will be installed. Roadway ruts shall not be in excess of 1/2 inch under a 4-foot straight edge. Install the piezoelectric sensor perpendicular to traffic. Locate the sensor in the lane as shown on the site detail sheet. Eleven-foot length sensors should be centered in the lane. The following is a typical step by step procedure for the installation of a piezoelectric sensor. Refer specifically to the manufacturer's current instructions provided with the sensor prior to installation.

1. Carefully mark the slot to be cut, perpendicular to the flow of traffic. Ensure that the sensors are properly positioned in the lane.
2. It is strongly recommended that a 3/4" wide diamond blade be used for cutting the slot, or that blades be ganged together to get a single 3/4 inch wide cut. The slot shall be wet cut to minimize damage to the road.
3. Cut a slot 3/4 inch wide ($\pm 1/16$ ") by 1" minimum deep. The slot should be 8" longer than the sensor (including the lead attachment). Drop the saw blade an extra 1/2" down on both ends of the sensor. The lead out should be centered on the slot.
4. Cut the home-run slot for the coax-cable 1/4-inch wide and at a depth so that the cable is a minimum of 1 inch below the road surface in rigid pavement (concrete) or 3 inches below the road surface in bituminous (asphalt) pavement.
5. Sweep and wash out all debris left in the slot and ensure it is clean and dry.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 12 of 17

6. Use high pressure water, or water and oil-free compressed air to clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot.
7. Totally remove excess water and debris from roadway and shoulder area. Debris should be disposed of properly.
8. Carefully 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.
9. Place a strip of duct tape on the pavement along the length of both sides of the sensor slot. Place the 2-4" wide duct tape 1/8" away from the slot.
10. Remove BL sensor from the box. Visually inspect each sensor to ensure it is straight without any twists or curls. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify the correct sensor (type and length) is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet.
11. Test the sensor for Capacitance, Dissipation Factor and Resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within $\pm 20\%$ of the enclosed data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results. This information should be stored in the counter cabinet and/or returned to KYTC Planning personnel.
12. Lay the sensor on the tape next to the slot. Ensure that the sensor is straight and flat. Ensure that you are wearing clean protective latex (or equivalent) gloves at all times when handling sensors.
13. Clean sensor with steel wool or emery pad. Wipe down with alcohol and clean lint-free cloth.
14. Place the installation bracket clips on the sensor, about every 6" for the length of the sensor.
15. Bend the end 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)
16. Place the sensor in the slot, with the brass element $3/8$ " below the road surface along the entire length. The end of the sensor should be at least 2" from the end of the slot and the tip should not touch the bottom of the slot. The top of the plastic installation bracket clips should be $1/8$ " below the surface of the road. The lead attachment should also not touch the bottom or sides of the slot. Ensure the ends of the sensors are pushed down sufficiently per the manufacturer's instructions.
17. 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).
18. Block off the ends of the slot using plumbers putty. Ensure that there are adequate "dams" at both ends so that the encapsulation material does not flow out. On the passive cable end, the dam should be about 3-5" past the end of the lead attachment area.
19. The encapsulation material should be placed full depth, overfilled, and allowed to cure 10 minutes before shaving level with the surface. Ensure it fills around and underneath the sensor completely and there is not a trough on top.
20. Remove the tape on the sides of the sensor as soon as the adhesive starts to cure.
21. Carefully remove all the plumbers putty from ends of the sensor.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 13 of 17

22. Route the lead in cable through the slot cut for it, and cover with approved loop sealant.
23. After the encapsulant has hardened, grind the top of the installation using an angle grinder. The profile should be flush with the road surface or with a slight, 1/16" mound. There shall be no concave portion to the mound.
24. Clean up the site. Sealant curing time varies with temperature and humidity. Contractor shall ensure that the complete curing of the encapsulation material has taken place prior to subjecting the sensors to traffic.

After the installation is complete, the minimum output voltages of each piezoelectric sensor shall meet the following: 1.5 Volts (peak) for a 10,000 pound axle and 200 millivolts (peak) for a car axle. The piezoelectric sensor lead-in cable is part of the sensor and can be ordered in different lengths (100' standard). Piezoelectric sensor lead-in cable shall not be spliced.

N. Cleanup and Restoration. The contractor will be responsible for all 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 includes any filling of ruts and leveling ground appropriately. Clean the site and dispose of all waste and debris off the right-of-way at sites obtained by the contractor at no additional cost to the Department. Sow all disturbed earthen areas with Seed Mixture No. I per Section 212.03.03 Permanent Seeding and Protection of the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Current Edition.

O. On-Site Inspection. Each contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize themselves 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. The Department will not honor any claims resulting from site conditions.

P. Property Damage. The contractor will be responsible for all damage to public and/or private property resulting from his work.

Q. Caution. 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 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.

R. 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.

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 14 of 17

S. Site Inspections. All sensors are to be tested by a member of the Central Office Division of Planning equipment staff after the installation is complete to verify that the station is operating properly. Tests shall demonstrate that the system operates in accordance with the plans and specifications. Inductance loop conductors shall test free of shorts and unauthorized grounds and shall have an insulating resistance of at least 100 megaohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground. If the sensors do not meet the specifications and/or KYTC's traffic recording equipment does not perform properly because of an improperly functioning sensor, the contractor shall be responsible for the replacement of the faulty sensor(s), as soon as practicable at their total cost.

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 15 of 17

IV. BID 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 the 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.

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

B. Junction Box Type 6" x 6" x 4" (or Type 10" x 8" x 4" if noted). Each type junction box shall include furnishing and installing specified junction box in accordance with the specifications. This item includes connectors, splice sleeves, conduit fittings, mounting materials and any other items required to complete this part of the installation. Incidental to this item is furnishing and installing any specified post (wood, channel, metal, etc.) as required for the installation.

C. Junction Box Type A (B or C). Each type junction box shall include furnishing and installing specified junction box in accordance with the specifications. This item includes concrete (if required), #57 aggregate, conduit fittings and backfilling around the unit.

D. Cabinet Type G (NEMA-3R). Cabinet (each) shall include furnishing and installing a Type G cabinet as specified. This item shall include constructing the concrete base or mounting cabinet to pole, installation of duplex receptacle and connection of all detectors (where applicable). Incidental to this item shall be furnishing, installing electrical service conductors, conduits, fused cutout, ground rods, all internal shelving, brackets, any necessary pole mounting hardware and electrical inspection fees.

E. Install Base Mount Enclosure. Install base mount enclosure (each) shall include installing a State-furnished cabinet or enclosure as specified. This item shall include all materials and labor for constructing the concrete base (or, if specified, mounting cabinet to pole), installation of the cabinet, duplex receptacle and connection of all detectors (where applicable). Incidental to this item shall be furnishing, installing electrical service conductors, conduits, fused cutout, ground rods, telephone service conduits from the cabinet to the telephone company disconnect box, all internal shelving, brackets, anchor bolts, any necessary pole mounting hardware and electrical inspection fees if applicable.

F. Galvanized Steel Cabinet. Cabinet (each) shall include furnishing and installing a galvanized steel cabinet and post(s) as specified on the drawing. This item shall include mounting the cabinet to post and the connection of all detectors. Incidental to this item shall be furnishing and installing conductors, conduit, ground rods, any necessary pole mounting hardware and any electrical inspection fees.

G. Wood Post. Wood post (each) shall include furnishing and installing a wood post as specified. This item includes excavation, concrete (if required), and backfilling around the unit.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 16 of 17

H. Conduit. Conduit shall include furnishing and installing specified conduit in accordance with specifications. This item includes conduit fittings, bodies, boxes, expansion joints, couplings, duct seal, bonding straps and any other necessary hardware. Conduit will be measured in linear feet.

I. Wire (or Cable). Wire or cable shall include furnishing and installing specified wire or cable within conduit, saw slot, or overhead as indicated on the detail sheets. This can include, but is not limited to: loop wire, Cable No. 14/1 Pair, etc. Incidental to this item shall be the labeling of all wires and cables in each junction box, cabinet and splice box; furnishing and installing of splice boots, cable rings or other hardware required for installing cable. Loop wire and cable will be measured in linear feet.

J. Loop Saw Slot and Fill. Loop saw slot and fill shall include sawing, cleaning and filling saw slots for induction loops, lead-in wires, etc. with loop sealant or specified approved material. Sawing and filling slot for wire will be measured in linear feet.

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

L. Electrical Service. Electrical services shall include all related work, labor, materials (e.g. meter, straps, conduit, fittings, wire, etc.) and fees towards furnishing and installing an electrical service, which has passed all required inspections. This will be measured in individual units each.

M. Telephone Service. Telephone services shall include all related work, labor, materials (e.g. meter, straps, conduit, fittings, wire, etc.) and fees towards furnishing and installing a telephone service, which has passed all required inspections. This will be measured in individual units each.

N. Piezoelectric Sensor or Approved Equal. Piezoelectric sensor (each) shall include furnishing and installing a Class I Piezoelectric Sensor in accordance with the specifications. Lead-in wire, splice kits, encapsulation material, grout, testing, and accessories shall be incidental to this bid item.

REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition, and Supplemental Specifications.
2. National Electrical Code (NEC), latest edition.
3. International Municipal Signal Association (IMSA) Specification No. 51-7- latest edition.
4. FHWA Manual of Uniform Traffic Control Devices, latest edition.
5. "Roadside Design Guide", developed in 1996 by the American Association of State Highway and Transportation Officials (AASHTO).
6. Kentucky Department of Highways Standard Drawings, current editions, as applicable:

TTC-115	Lane Closure Case I
TTC-135	Shoulder Closure
TTD-100	Miscellaneous Traffic Control Devices (sheet 1)
TTD-105	Miscellaneous Traffic Control Devices (sheet 2)
TTD-110	Post Splicing Detail
TTD-115	Flashing Arrow
7. Kentucky Department of Highways Sepia Drawings:

Silt Fence

Updated: April 11, 2006

GENERAL NOTES
JEFFERSON COUNTY I 264
TRAFFIC DATA COLLECTION STATION 773 – MP 13.8~14.2

The Division of Planning needs to re-establish a Traffic Data Collection Station within a section of a construction project in Jefferson County on I-264. Planning is requesting to have service replaced at a site with an approximate mile-point of 14.0, with the installation of traffic loop and piezo sensors in the newly paved roadway surface. Exact location will be determined in the field.

Contractor shall install two (2) loop sensors and two (2) piezos in each lane. All wires shall be run splice free through Type-A junction boxes and directly into the 20"x20" cabinets as show in Figure 1. All new materials shall be used in this reconstruction.

Therefore, the contractor will install a total of sixteen (16) loop sensors and sixteen (16) piezos in the roadway. Installation shall be coordinated with and approved by appropriate Division of Planning staff. Reference "Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors" for materials, construction and installation details and "Standard Details for Installation of Traffic Counting Inductance Loops and Sensors". Also see the Standard Details for Installation of Traffic Counting Inductance Loops and Axle Sensors, Location Drawings, Location Table and Estimate of Quantities, in regard to this specific project.

NOTE:

The Special Notes for Traffic Counting Inductance Loops and Axle Sensors are generic. Only the sections that pertain to the specified location and the bid items listed in this summary are applicable.

SPECIAL NOTES:

The location listed in the proposal is approximate only. Contractor will need to contact the utility companies to verify locations to underground service prior to beginning work. The Engineer, in coordination with the Central Office Division of Planning, will designate the exact location at the time of construction.

Notify the Central Office Division of Planning (502-564-7183, Equipment Management Team) a minimum of 14 days prior to beginning work in order for them to have the option to be present during sensor installation. The Engineer will contact and maintain liaison with the District Planning Engineer and the Central Office Division of Planning in order to coordinate the work.

LOCATION TABLE
JEFFERSON COUNTY – I-264
TRAFFIC DATA COLLECTION STATION 773 MP 13.8~14.2

STATION	DESCRIPTION	MP BEGIN	LOCATION	MP END	LANES	PIEZOS	LOOPS	PROJECT MP LIMITS
773	2 loops, 2 piezo/lane	13.491	13.8~14.2	14.646	8	16	16	12.7-18.41

TRAFFIC DATA COLLECTION STATION A01 is located on I-264 at approximately the 14.0 mile-point (MP) with the final location confirmed by appropriate Division of Planning staff. This station has eight (8) lanes of traffic, four (4) Eastbound lanes (loops#1-8) and (piezos 1-8) and four (4) Westbound lanes (loops #1-8) and (piezos 1-8). Each lane will have a loop-piezo-loop-piezo combination of sensors installed as depicted in Figure 1. The contractor shall install the sensors in each lane and run their lead-ins splice-free through the Type-A junction boxes and into the 20"x20" cabinets as depicted in Figure 1. All new materials shall be utilized in the construction of this project.

*Piezoelectric Sensor includes sixteen Class I (6') sensors. Note that the sensors should be ordered with 100-foot lead-ins unless the site requires longer lead-in lengths. (up to 500' available).

ESTIMATE OF QUANTITIES

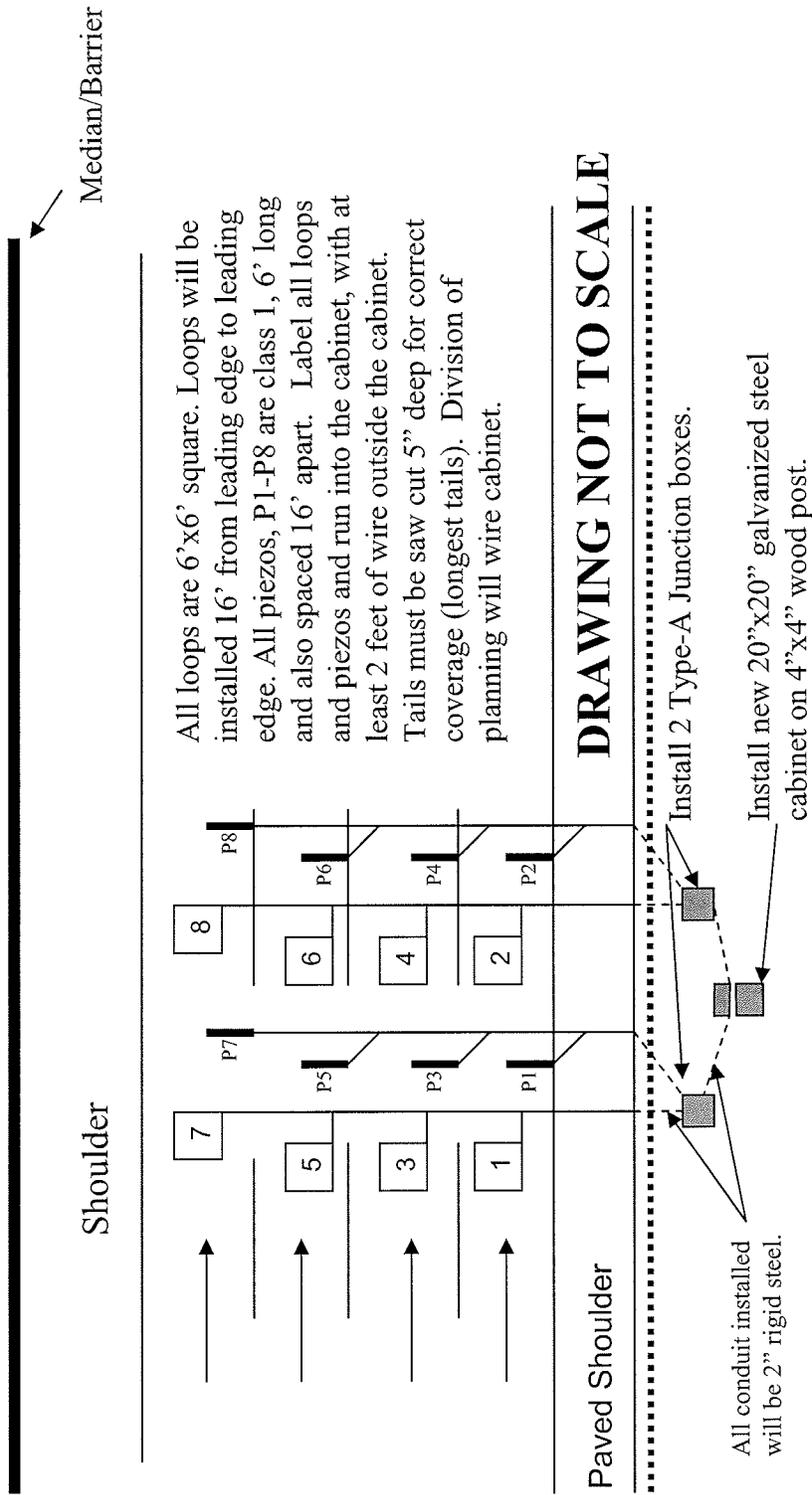
CODE	DESCRIPTION	UNIT	QUANTITY
2562	Signs	SQ FT	160
2650	Maintain And Control Traffic	LUMP SUM	1
2775	Flashing Arrow	EACH	1
4795	Conduit 2 inch Rigid	EACH	130
4820	Trenching And Backfilling	LINEAR FEET	110
4829	Piezoelectric Sensor	EACH	16
4830	Loop Wire	LINEAR FEET	3368
4895	Loop Saw Slot And Fill	LINEAR FEET	560
20359EC	20"x20" Galv. Steel Cabinet	EACH	2
20360ES818	4"x4" Wood Post	EACH	2
20391ES835	Junction Box Type-A	EACH	4

Contractor is responsible for the above materials listing. Specifications on materials and installation instructions for loops are found in the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors.

Site Drawing

Jefferson Co. I 264 Sta. 773 Eastbound

Figure 2

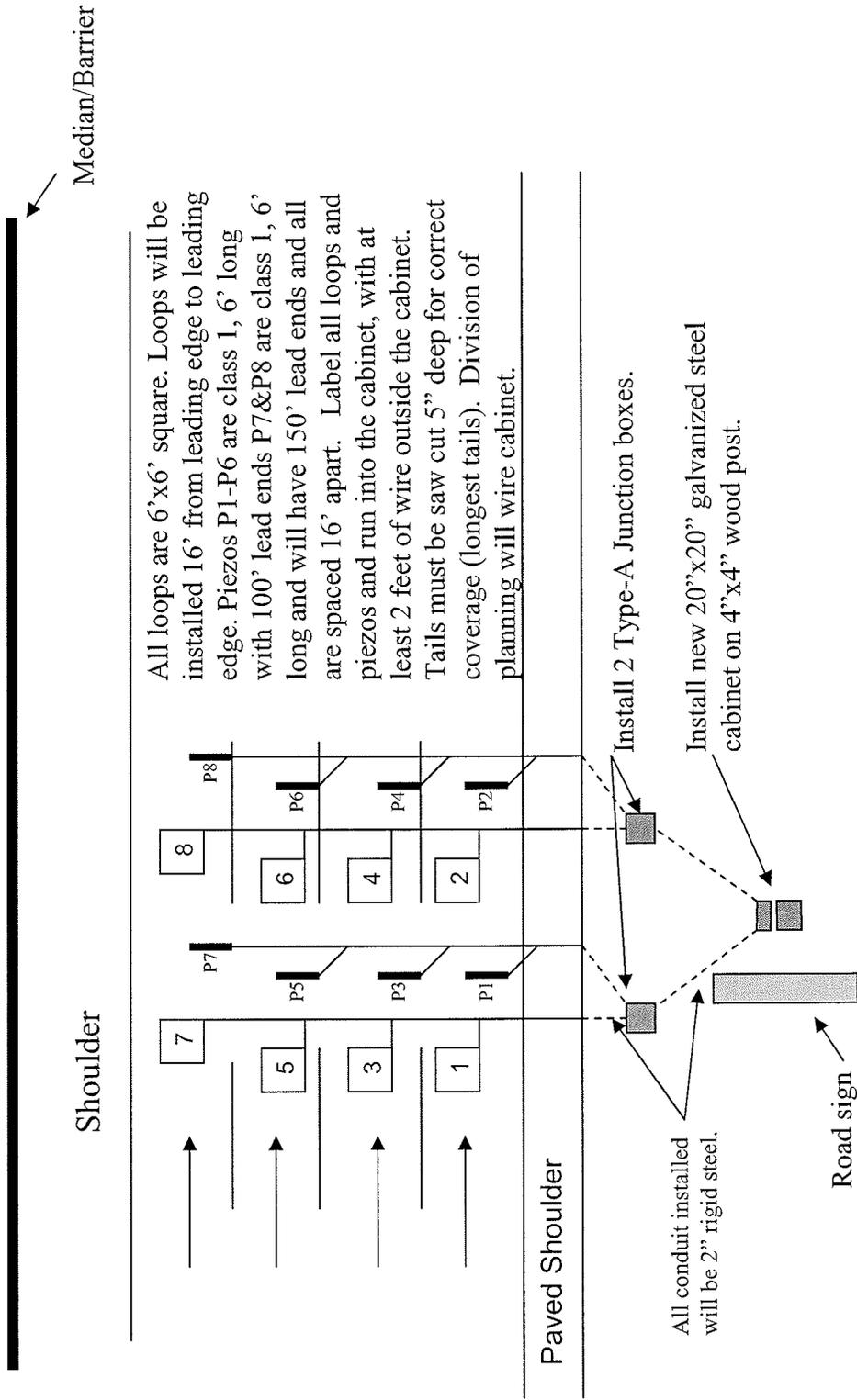


4/9/2008

Site Drawing

Jefferson Co. I 264 Sta. 773 Westbound

Figure 1



All loops are 6'x6' square. Loops will be installed 16' from leading edge to leading edge. Piezos P1-P6 are class 1, 6' long with 100' lead ends P7&P8 are class 1, 6' long and will have 150' lead ends and all are spaced 16' apart. Label all loops and piezos and run into the cabinet, with at least 2 feet of wire outside the cabinet. Tails must be saw cut 5" deep for correct coverage (longest tails). Division of planning will wire cabinet.

All conduit installed will be 2" rigid steel.

Install 2 Type-A Junction boxes.

Install new 20"x20" galvanized steel cabinet on 4"x4" wood post.

Road sign

DRAWING NOT TO SCALE

4/9/2008

**LOCATION TABLE
JEFFERSON COUNTY – I-264 EAST
AUTOMATIC TRAFFIC RECORDING STATION P-94 – MP 15.0**

STATION	DESCRIPTION	MP BEGIN	LOCATION	MP END	LANES	PIEZOS	LOOPS	PROJECT MP LIMITS
P-94	2loop/lane 2piezo/lane	14.646	15	15.559	5	10	10	12.7-18.41

AUTOMATIC TRAFFIC RECORDING STATION P-94 is located on I-264 E at approximately the 15.0 mile-point (MP) with the final location confirmed by appropriate Division of Planning staff. This station has five (5) lanes of traffic. Each lane will have a loop-piezo-loop-piezo combination of sensors installed as depicted in Figure 1. The contractor shall install the sensors in each lane and run their lead-ins splice-free through the existing junction boxes into the existing cabinet as depicted in Figure 1. Contractor shall remove existing wire from cabinet and junction boxes from previous installation. All new materials shall be utilized in the construction of this project with the exception of junction boxes and cabinet

ESTIMATE OF QUANTITIES

CODE	DESCRIPTION	UNIT	QUANTITY
2562	Signs	SQ FT	160
2650	Maintain And Control Traffic	LUMP SUM	1
2775	Flashing Arrow	EACH	1
4829	Piezoelectric Sensor	EACH	10
4830	Loop Wire	LINEAR FEET	2140
4895	Loop Saw Slot And Fill	LINEAR FEET	512

*Piezo sensors are 6' class 1 with 100' lead-in wires

Contractor is responsible for the above materials listing. Specifications on materials and installation instructions for loops are found in the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors.

GENERAL NOTES
JEFFERSON COUNTY – I-264 EAST
AUTOMATIC TRAFFIC RECORDING STATION P-94 – MP 15.0

The Division of Planning needs to re-establish an Automatic Traffic Recording Station within a section of the resurfacing project in Jefferson County on I-264 E. Planning is requesting to have service replaced at a site with an approximate mile-point of 15.0, with the installation of traffic loop sensors, and piezoelectric sensors, once the resurfacing project is deemed complete. Exact location will be determined in the field.

Contractor shall install two (2) loop sensors and two (2) piezoelectric sensors in each lane at their proximal previous locations. The existing wires shall be removed from the cabinet and junction boxes in this reconstruction.

Therefore, the contractor will install a total of ten (10) loop sensors and ten (10) piezoelectric sensors in the roadway and run their lead-ins splice-free through the existing junction boxes into the existing cabinet as indicated in Figure 1. Installation shall be coordinated with and approved by appropriate Division of Planning staff. Reference “Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors” for materials, construction and installation details and “Standard Details for Installation of Traffic Counting Inductance Loops and Sensors”. Also see the Standard Details for Installation of Traffic Counting Inductance Loops and Axle Sensors, Location Drawings, Location Table and Estimate of Quantities, in regard to this specific project.

NOTE:

The Special Notes for Traffic Counting Inductance Loops and Axle Sensors are generic. Only the sections that pertain to the specified location and the bid items listed in this summary are applicable.

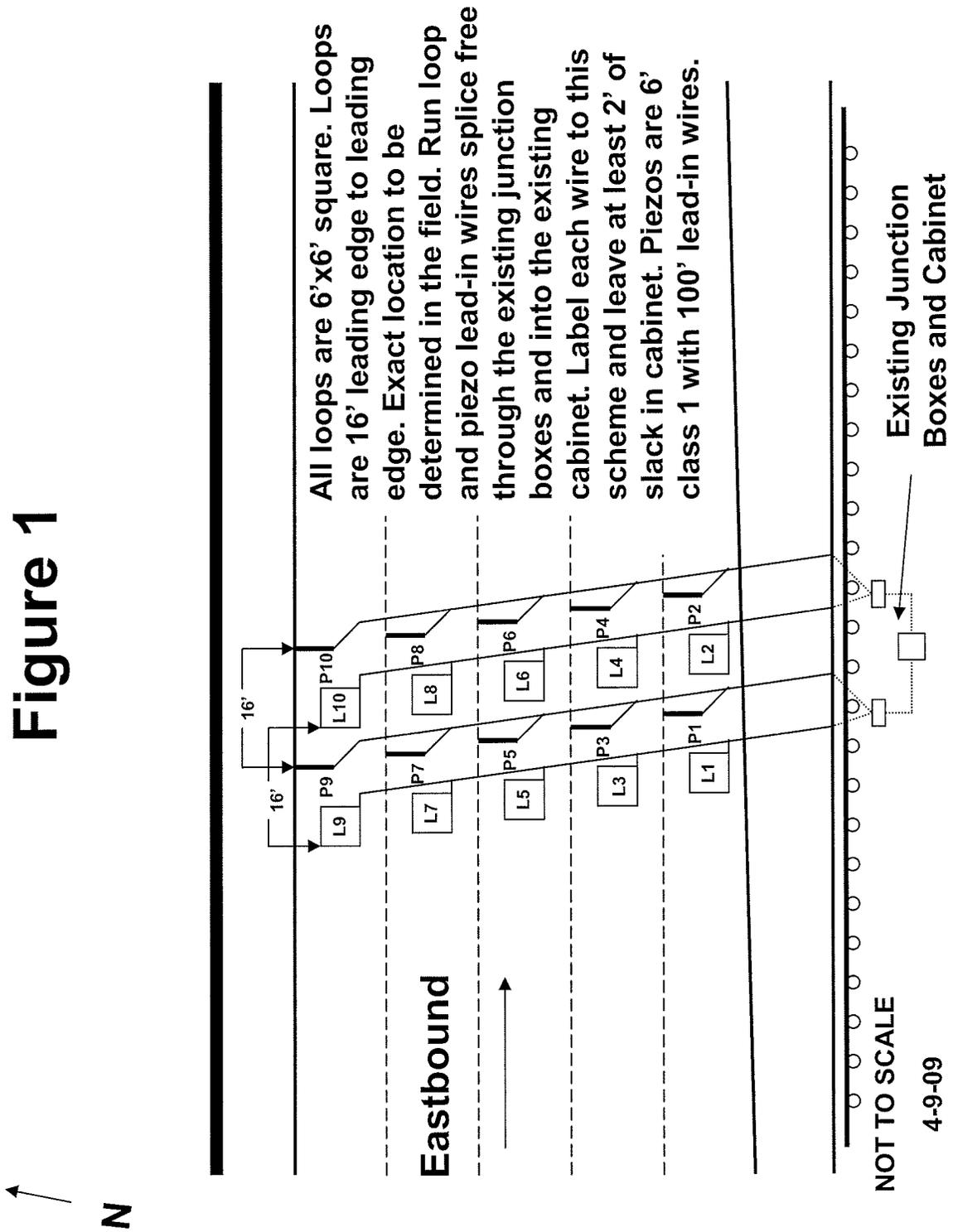
SPECIAL NOTES:

The location listed in the proposal is approximate only. The Engineer, in coordination with the Central Office Division of Planning, will designate the exact location at the time of construction.

Notify the Central Office Division of Planning (502-564-7183, Equipment Management Team) a minimum of 14 days prior to beginning work in order for them to have the option to be present during sensor installation. The Engineer will contact and maintain liaison with the District Planning Engineer and the Central Office Division of Planning in order to coordinate the work.

Site Drawing Jefferson Co. I-264 Sta. P-94 MP 15

Figure 1



LOCATION TABLE
JEFFERSON COUNTY – I-264 WEST
AUTOMATIC TRAFFIC RECORDING STATION P-95 – MP 15.0

STATION	DESCRIPTION	MP BEGIN	LOCATION	MP END	LANES	PIEZOS	LOOPS	PROJECT MP LIMITS
P-95	2loop/lane 2piezo/lane	14.646	15	15.595	5	10	10	12.7-18.41

AUTOMATIC TRAFFIC RECORDING STATION P-95 is located on I-264 W at approximately the 15.0 mile-point (MP) with the final location confirmed by appropriate Division of Planning staff. This station has five (5) lanes of traffic. Each lane will have a loop-piezo-loop-piezo combination of sensors installed as depicted in Figure 1. The contractor shall install the sensors in each lane and run their lead-ins splice-free through the existing junction box and into the existing cabinet as depicted in Figure 1. Contractor shall remove existing wire from cabinet and junction box from previous installation. All new materials shall be utilized in the construction of this project with the exception of junction boxes and cabinet

ESTIMATE OF QUANTITIES

CODE	DESCRIPTION	UNIT	QUANTITY
2562	Signs	SQ FT	160
2650	Maintain And Control Traffic	LUMP SUM	1
2775	Flashing Arrow	EACH	1
4829	Piezoelectric Sensor	EACH	10
4830	Loop Wire	LINEAR FEET	2140
4895	Loop Saw Slot And Fill	LINEAR FEET	508

*Piezo sensors are 6' class 1 with 100' lead-in wires

Contractor is responsible for the above materials listing. Specifications on materials and installation instructions for loops are found in the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors.

GENERAL NOTES
JEFFERSON COUNTY – I-264 WEST
AUTOMATIC TRAFFIC RECORDING STATION P-95 – MP 15.0

The Division of Planning needs to re-establish an Automatic Traffic Recording Station within a section of the resurfacing project in Jefferson County on I-264 W. Planning is requesting to have service replaced at a site with an approximate mile-point of 15.0, with the installation of traffic loop sensors, and piezoelectric sensors, once the resurfacing project is deemed complete. Exact location will be determined in the field.

Contractor shall install two (2) loop sensors and two (2) piezoelectric sensors in each lane at their proximal previous locations. The existing wires shall be removed from the cabinet and junction boxes in this reconstruction.

Therefore, the contractor will install a total of ten (10) loop sensors and ten (10) piezoelectric sensors in the roadway and run their lead-ins splice-free through the existing junction box and into the existing cabinet as indicated in Figure 1. Installation shall be coordinated with and approved by appropriate Division of Planning staff. Reference "Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors" for materials, construction and installation details and "Standard Details for Installation of Traffic Counting Inductance Loops and Sensors". Also see the Standard Details for Installation of Traffic Counting Inductance Loops and Axle Sensors, Location Drawings, Location Table and Estimate of Quantities, in regard to this specific project.

NOTE:

The Special Notes for Traffic Counting Inductance Loops and Axle Sensors are generic. Only the sections that pertain to the specified location and the bid items listed in this summary are applicable.

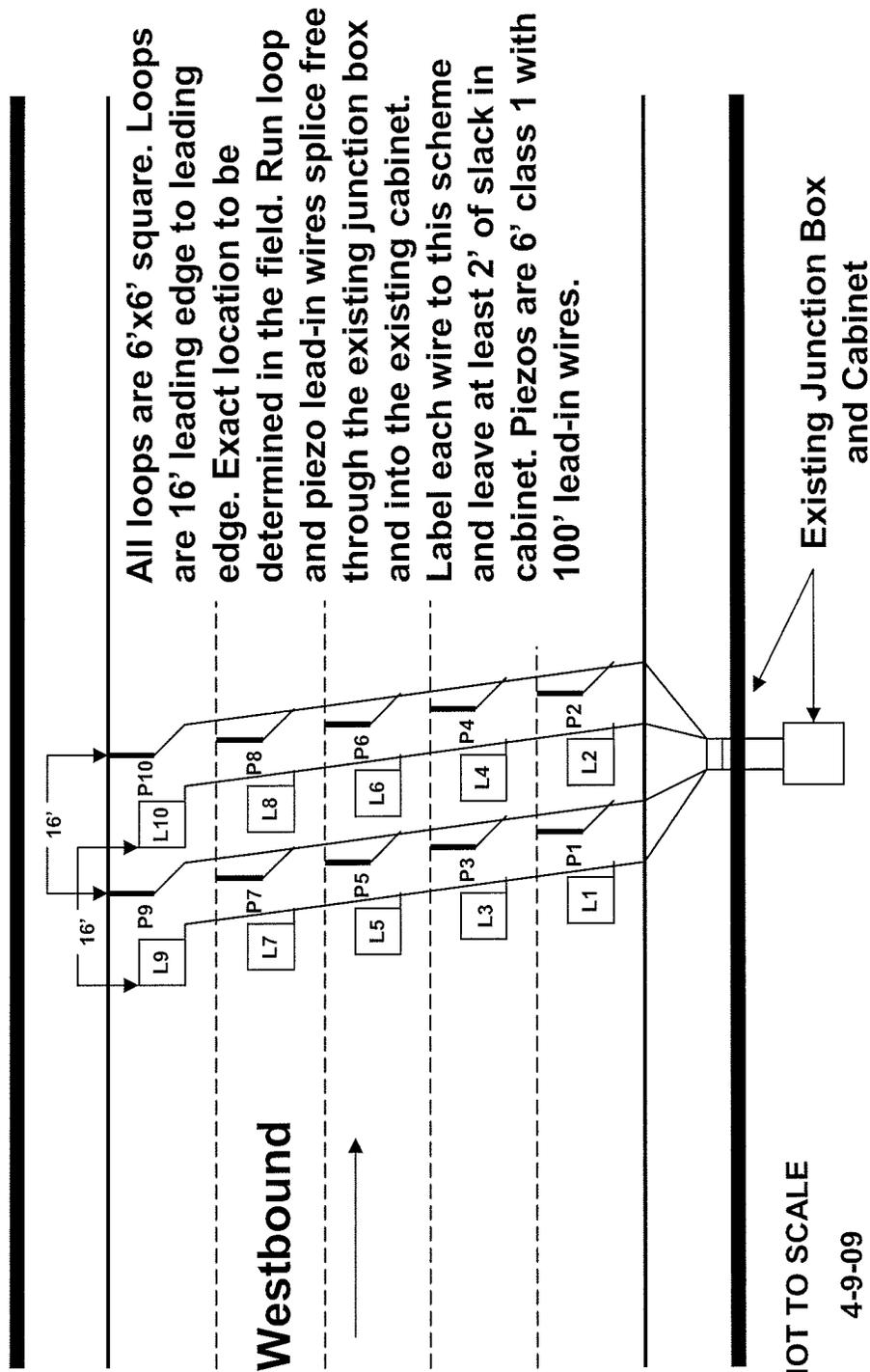
SPECIAL NOTES:

The location listed in the proposal is approximate only. The Engineer, in coordination with the Central Office Division of Planning, will designate the exact location at the time of construction.

Notify the Central Office Division of Planning (502-564-7183, Equipment Management Team) a minimum of 14 days prior to beginning work in order for them to have the option to be present during sensor installation. The Engineer will contact and maintain liaison with the District Planning Engineer and the Central Office Division of Planning in order to coordinate the work.

Site Drawing Jefferson Co. I-264 Sta. P-95 MP 15

Figure 1



NOT TO SCALE
4-9-09

GENERAL NOTES
JEFFERSON COUNTY – I-264
TRAFFIC DATA COLLECTION STATION 441 – MP 16.4 and 16.5

The Division of Planning needs to re-establish a Traffic Data Collection Station within a section of a construction project in Jefferson County on I-264. Planning is requesting to have service replaced at a site (with an approximate mile-point of 16.4 on westbound side and 16.5 on eastbound side) with the installation of traffic loop and piezo sensors in the newly paved roadway surface. Exact location will be determined in the field.

Contractor shall install two (2) loop sensors and two (2) piezo in each lane. All wires shall be run splice free through Type-A junction boxes and directly into the 20"x20" cabinets as shown in Figure 1. All new materials shall be used in this reconstruction.

Therefore, the contractor will install a total of twenty (20) loop sensors and twenty (20) piezos in the roadway. Installation shall be coordinated with and approved by appropriate Division of Planning staff. Reference "Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors" for materials, construction and installation details and "Standard Details for Installation of Traffic Counting Inductance Loops and Sensors". Also see the Standard Details for Installation of Traffic Counting Inductance Loops and Axle Sensors, Location Drawings, Location Table and Estimate of Quantities, in regard to this specific project.

NOTE:

The Special Notes for Traffic Counting Inductance Loops and Axle Sensors are generic. Only the sections that pertain to the specified location and the bid items listed in this summary are applicable.

SPECIAL NOTES:

The location listed in the proposal is approximate only. Contractor will need to contact the utility companies to verify locations to underground service prior to beginning work. The Engineer, in coordination with the Central Office Division of Planning, will designate the exact location at the time of construction.

Notify the Central Office Division of Planning (502-564-7183, Equipment Management Team) a minimum of 14 days prior to beginning work in order for them to have the option to be present during sensor installation. The Engineer will contact and maintain liaison with the District Planning Engineer and the Central Office Division of Planning in order to coordinate the work.

LOCATION TABLE
JEFFERSON COUNTY – I-264
TRAFFIC DATA COLLECTION STATION 441 – MP 16.4 and 16.5

STATION	DESCRIPTION	MP BEGIN	LOCATION	MP END	LANES	PIEZOS	LOOPS	PROJECT MP LIMITS
441	2 loops, 2 piezo/lane	15.559	16.4, 16.5	17.085	10	20	20	13.71 – 18.41

TRAFFIC DATA COLLECTION STATION 441 is located on I-264 at approximately the 16.4 mile-point (MP) on the Westbound side and at approximately the 16.5 mile-point (MP) on the Eastbound side with the final locations confirmed by appropriate Division of Planning staff. This station has ten (10) lanes of traffic, five (5) Eastbound lanes (loops#1-10) and (piezos 1-10) and five (5) Westbound lanes (loops #1-10) and (piezos 1-10). Each lane will have a loop-piezo-loop-piezo combination of sensors installed as depicted in Figure 1 and 1a. The contractor shall install the sensors in each lane and run their lead-ins splice-free through the Type-A junction boxes and into the 20"x20" cabinets as depicted in Figure 1 and 1a. All new materials shall be utilized in the construction of this project.

*Piezoelectric Sensor includes eight Class I (6') sensors. Note that the sensors should be ordered with 100-foot lead-ins unless the site requires longer lead-in lengths. (up to 500' available).

ESTIMATE OF QUANTITIES

CODE	DESCRIPTION	UNIT	QUANTITY
2562	Signs	SQ FT	160
2650	Maintain And Control Traffic	LUMP SUM	1
2775	Flashing Arrow	EACH	1
4795	Conduit 2 inch Rigid	EACH	100
4820	Trenching And Backfilling	LINEAR FEET	80
4829	Piezoelectric Sensor	EACH	20
4830	Loop Wire	LINEAR FEET	4276
4895	Loop Saw Slot And Fill	LINEAR FEET	708
20359EC	20"x20" Galv. Steel Cabinet	EACH	2
20360ES818	4"x4" Wood Post	EACH	2
20391ES835	Junction Box Type-A	EACH	4

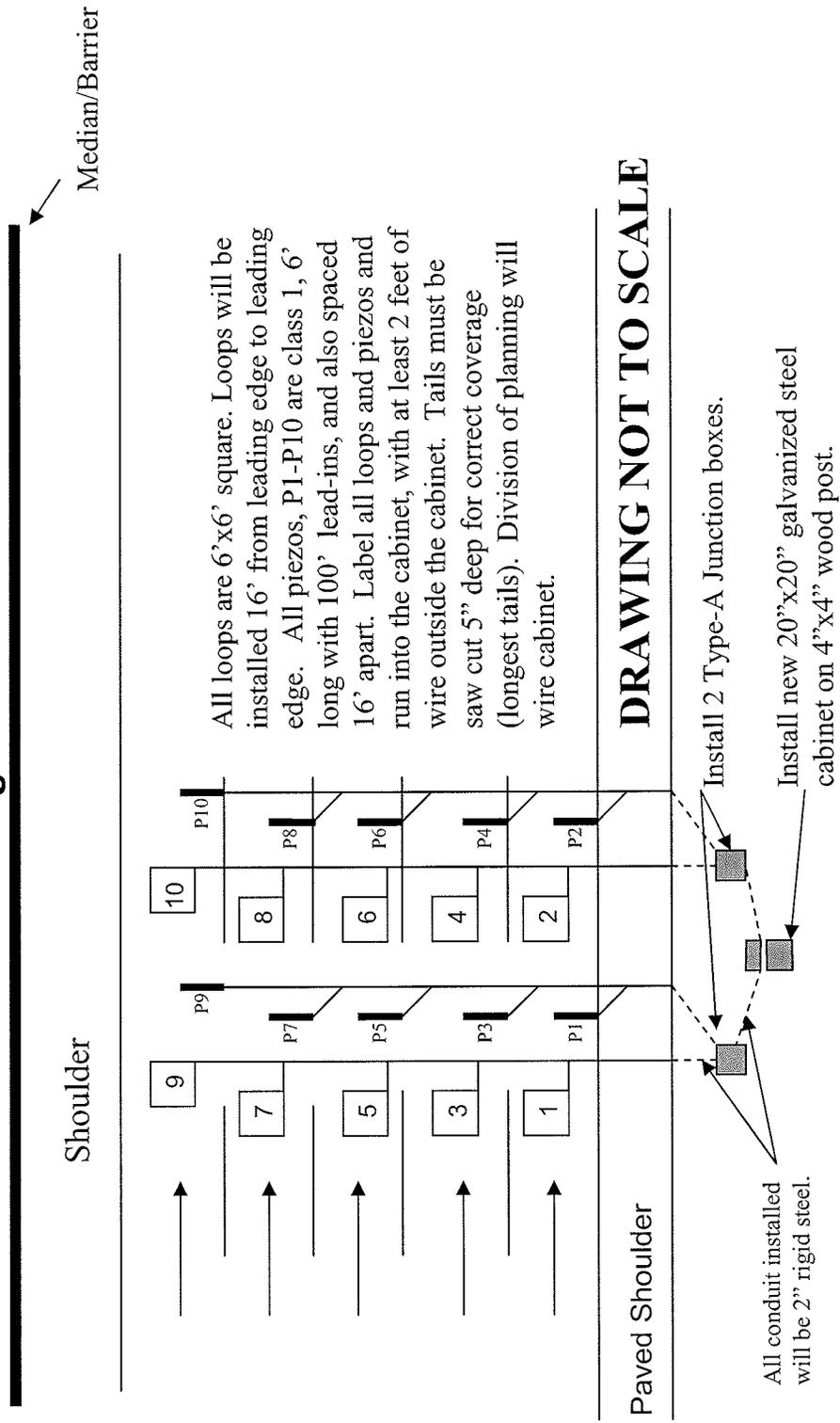
Contractor is responsible for the above materials listing. Specifications on materials and installation instructions for loops are found in the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors.

Site Drawing

Jefferson Co., I-264 STA. 441 M.P. (16.5)

Eastbound

Figure 1



All loops are 6'x6' square. Loops will be installed 16' from leading edge to leading edge. All piezos, P1-P10 are class 1, 6' long with 100' lead-ins, and also spaced 16' apart. Label all loops and piezos and run into the cabinet, with at least 2 feet of wire outside the cabinet. Tails must be saw cut 5" deep for correct coverage (longest tails). Division of planning will wire cabinet.

DRAWING NOT TO SCALE

Install 2 Type-A Junction boxes.

Install new 20"x20" galvanized steel cabinet on 4"x4" wood post.

All conduit installed will be 2" rigid steel.

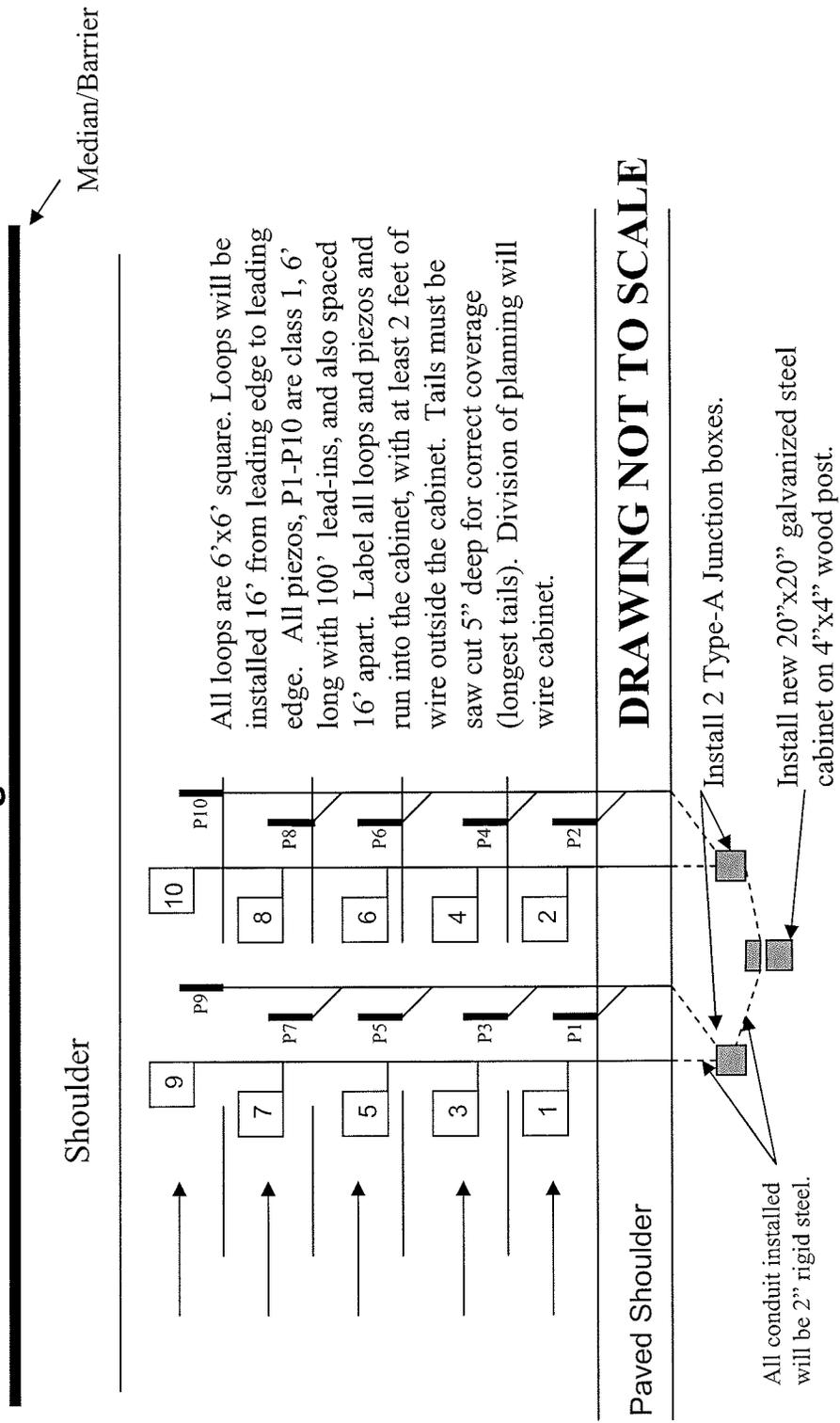
4/10/2009

Site Drawing

Jefferson Co., I-264 STA. 441 M.P. (16.4)

Westbound

Figure 1a



4/10/2009

GENERAL NOTES
JEFFERSON COUNTY – I-264
TRAFFIC DATA COLLECTION STATION 157 – MP 17.4

The Division of Planning needs to re-establish a Traffic Data Collection Station within a section of a construction project in Jefferson County on I-264. Planning is requesting to have service replaced at a site (with an approximate mile-point of 17.4) with the installation of traffic loop and piezo sensors in the newly paved roadway surface. Exact location will be determined in the field.

Contractor shall install two (2) loop sensors and two (2) piezo in each lane. All wires shall be run splice free through Type-A junction boxes and directly into the 20"x20" cabinets as shown in Figure 1 and 1a. All new materials shall be used in this reconstruction.

Therefore, the contractor will install a total of twenty (20) loop sensors and twenty (20) piezos in the roadway. Installation shall be coordinated with and approved by appropriate Division of Planning staff. Reference "Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors" for materials, construction and installation details and "Standard Details for Installation of Traffic Counting Inductance Loops and Sensors". Also see the Standard Details for Installation of Traffic Counting Inductance Loops and Axle Sensors, Location Drawings, Location Table and Estimate of Quantities, in regard to this specific project.

NOTE:

The Special Notes for Traffic Counting Inductance Loops and Axle Sensors are generic. Only the sections that pertain to the specified location and the bid items listed in this summary are applicable.

SPECIAL NOTES:

The location listed in the proposal is approximate only. Contractor will need to contact the utility companies to verify locations to underground service prior to beginning work. The Engineer, in coordination with the Central Office Division of Planning, will designate the exact location at the time of construction.

Notify the Central Office Division of Planning (502-564-7183, Equipment Management Team) a minimum of 14 days prior to beginning work in order for them to have the option to be present during sensor installation. The Engineer will contact and maintain liaison with the District Planning Engineer and the Central Office Division of Planning in order to coordinate the work.

LOCATION TABLE
JEFFERSON COUNTY – I-264
TRAFFIC DATA COLLECTION STATION 157 – MP 17.4

STATION	DESCRIPTION	MP BEGIN	LOCATION	MP END	LANES	PIEZOS	LOOPS	PROJECT MP LIMITS
157	2 loops, 2 piezo/lane	17.085	17.4	17.943	10	20	20	13.71 – 18.41

TRAFFIC DATA COLLECTION STATION 441 is located on I-264 at approximately the 17.4 mile-point (MP) with the final locations confirmed by appropriate Division of Planning staff. This station has ten (10) lanes of traffic, six (6) Eastbound lanes (loops#1-12) and (piezos 1-12) and four (4) Westbound lanes (loops #1-8) and (piezos 1-8). Each lane will have a loop-piezo-loop-piezo combination of sensors installed as depicted in Figure 1 and 1a. The contractor shall install the sensors in each lane and run their lead-ins splice-free through the Type-A junction boxes and into the 20"x20" cabinets as depicted in Figure 1 and 1a. All new materials shall be utilized in the construction of this project.

*Piezoelectric Sensor includes twenty Class I (6') sensors. Note that the sensors should be ordered with 100-foot lead-ins unless the site requires longer lead-in lengths. (up to 500' available).

ESTIMATE OF QUANTITIES

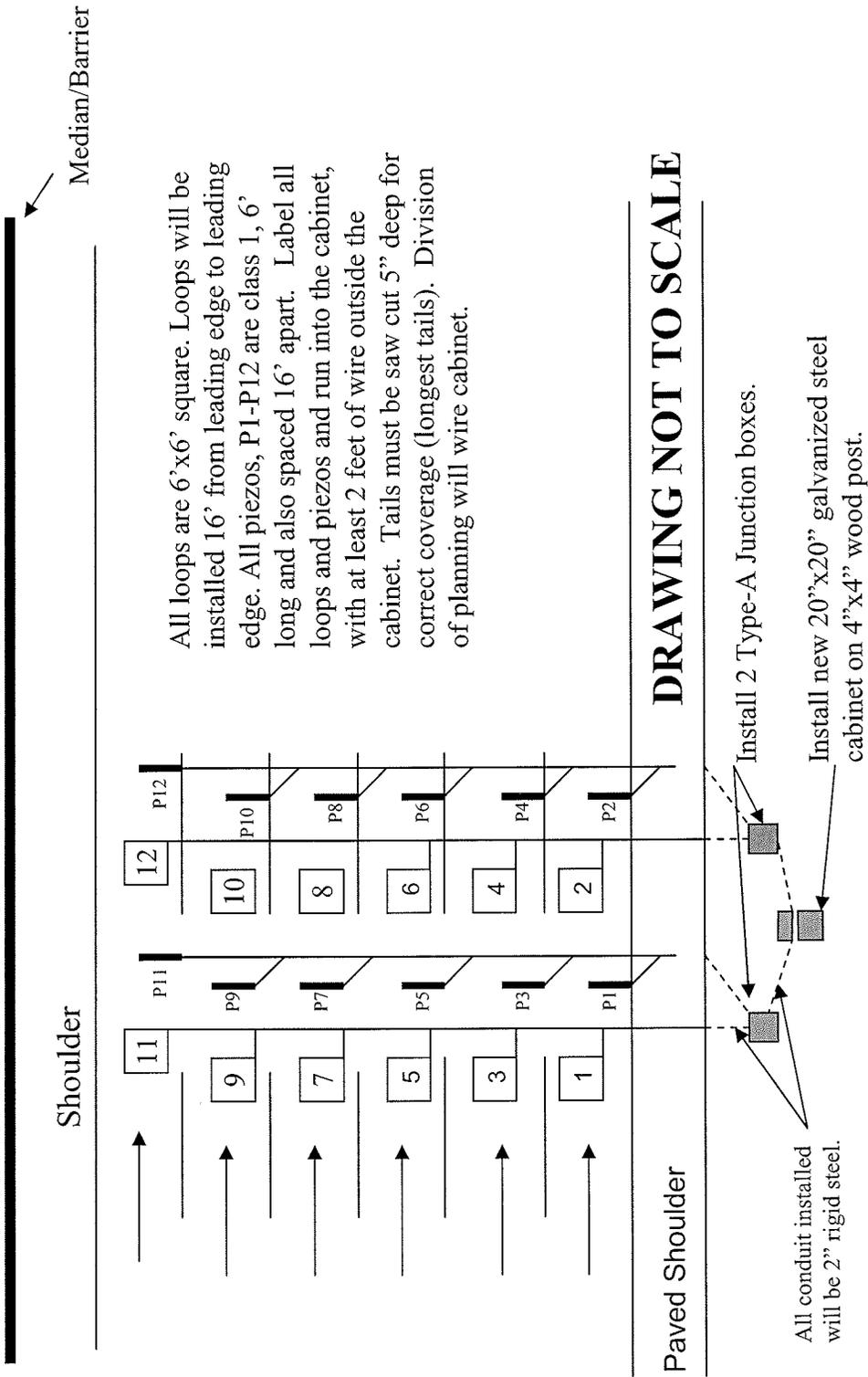
CODE	DESCRIPTION	UNIT	QUANTITY
2562	Signs	SQ FT	160
2650	Maintain And Control Traffic	LUMP SUM	1
2775	Flashing Arrow	EACH	1
4795	Conduit 2 inch Rigid	EACH	100
4820	Trenching And Backfilling	LINEAR FEET	80
4829	Piezoelectric Sensor	EACH	20
4830	Loop Wire	LINEAR FEET	4334
4895	Loop Saw Slot And Fill	LINEAR FEET	708
20359EC	20"x20" Galv. Steel Cabinet	EACH	2
20360ES818	4"x4" Wood Post	EACH	2
20391ES835	Junction Box Type-A	EACH	4

Contractor is responsible for the above materials listing. Specifications on materials and installation instructions for loops are found in the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors.

Site Drawing

Jefferson Co. I 264 Sta. 157 Eastbound

Figure 1



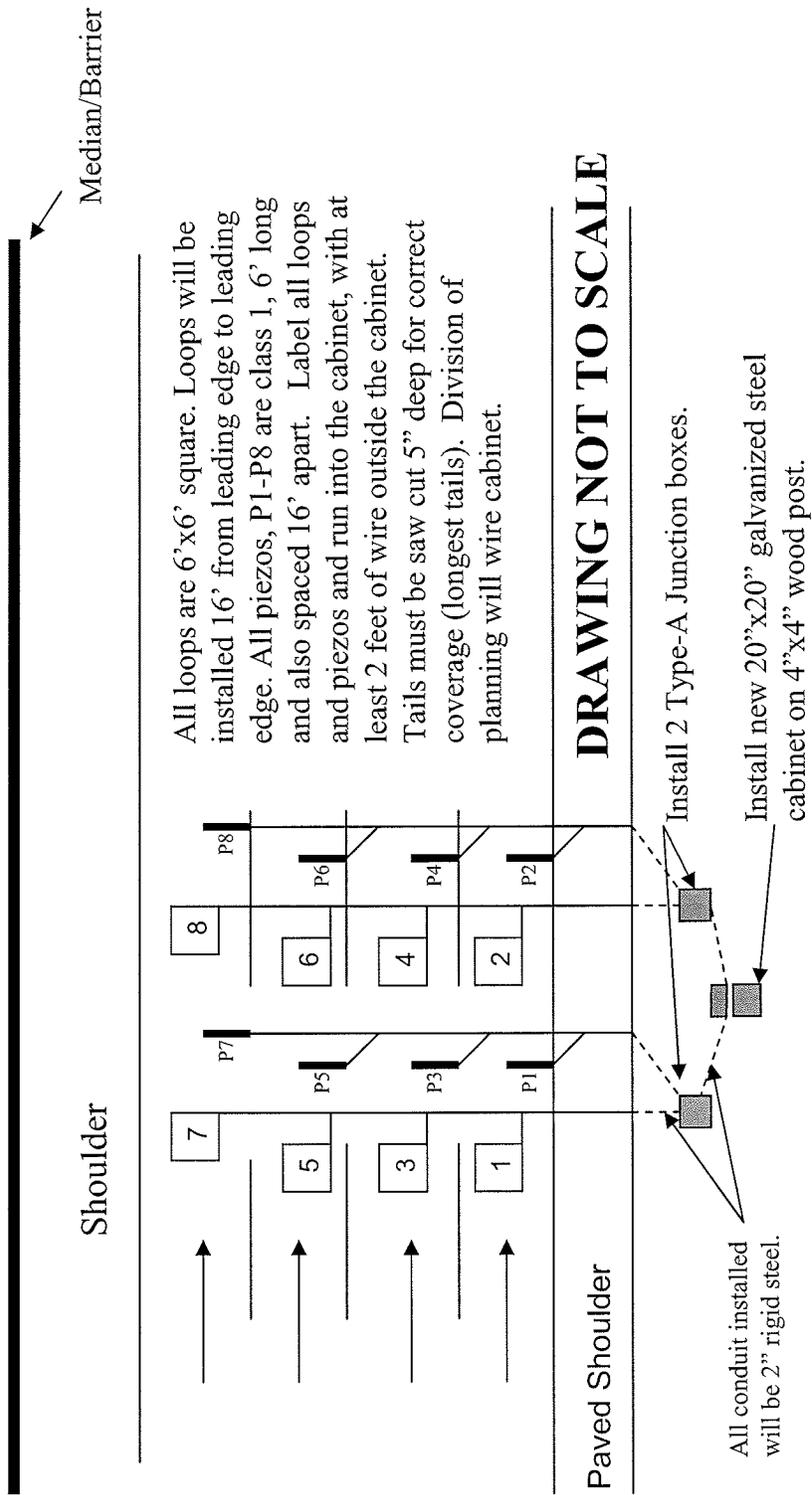
All loops are 6'x6' square. Loops will be installed 16' from leading edge to leading edge. All piezos, P1-P12 are class 1, 6' long and also spaced 16' apart. Label all loops and piezos and run into the cabinet, with at least 2 feet of wire outside the cabinet. Tails must be saw cut 5" deep for correct coverage (longest tails). Division of planning will wire cabinet.

4/13/2009

Site Drawing

Jefferson Co. I 264 Sta. 157 Westbound

Figure 1



4/9/2009

DIVISION OF PLANNING

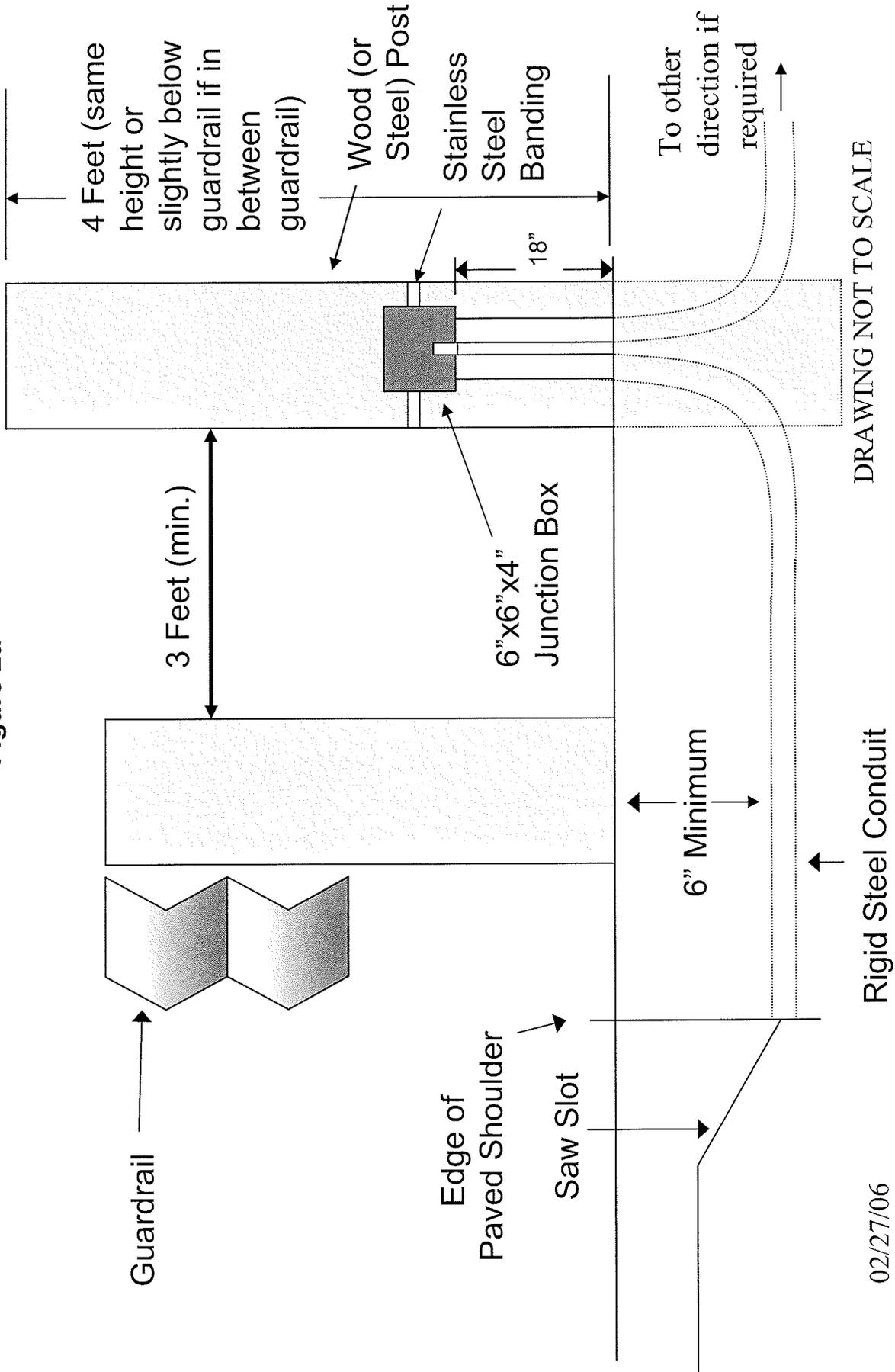
**STANDARD DETAILS FOR INSTALLATION
OF TRAFFIC COUNTING INDUCTANCE
LOOPS AND AXLE SENSORS**

DRAWINGS ARE NOT TO SCALE

Rev. 12/08

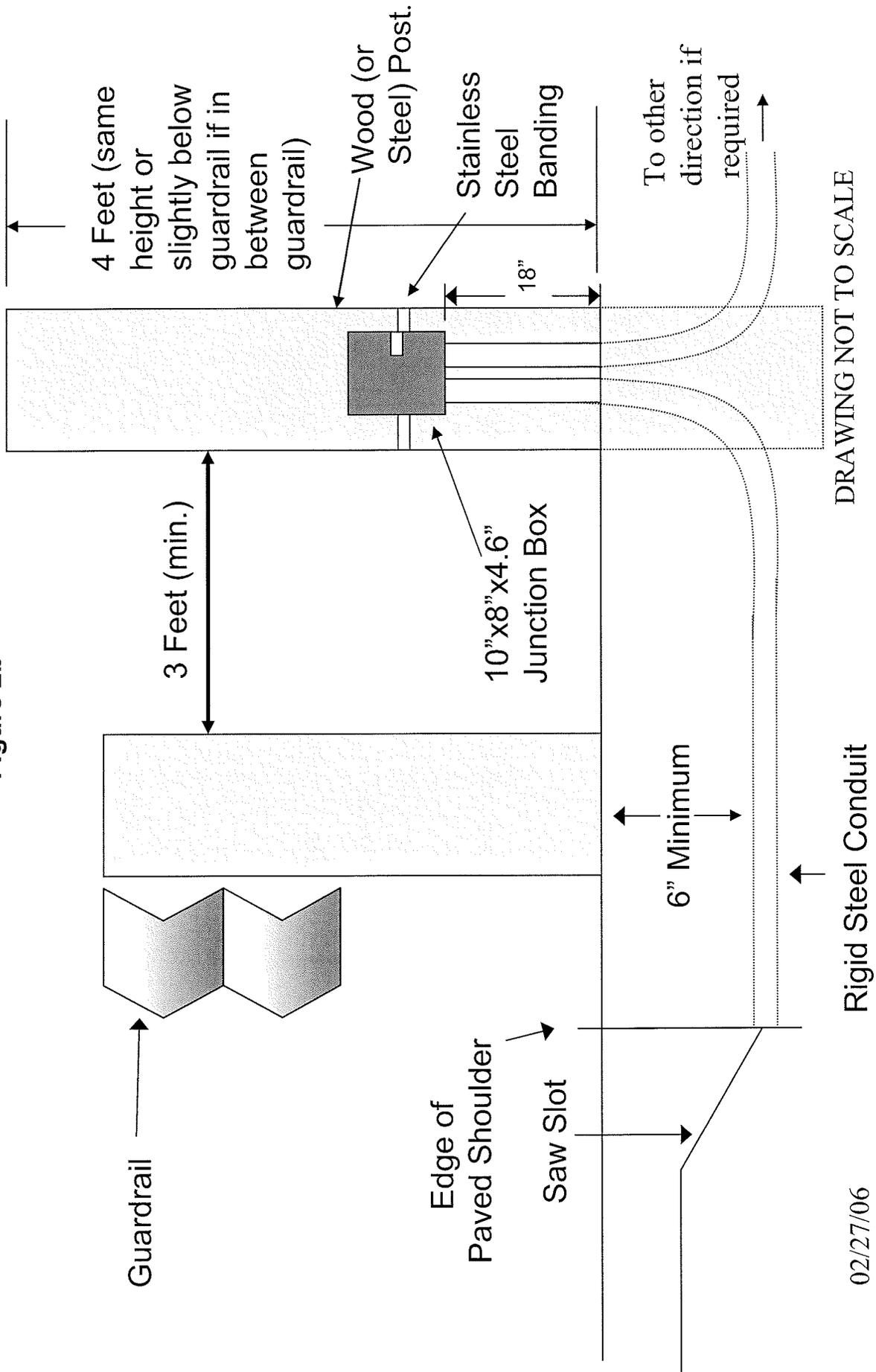
Junction Box Type 6" x 6" x 4" Detail

Figure 2a



Junction Box Type 10" x 8" x 4" Detail

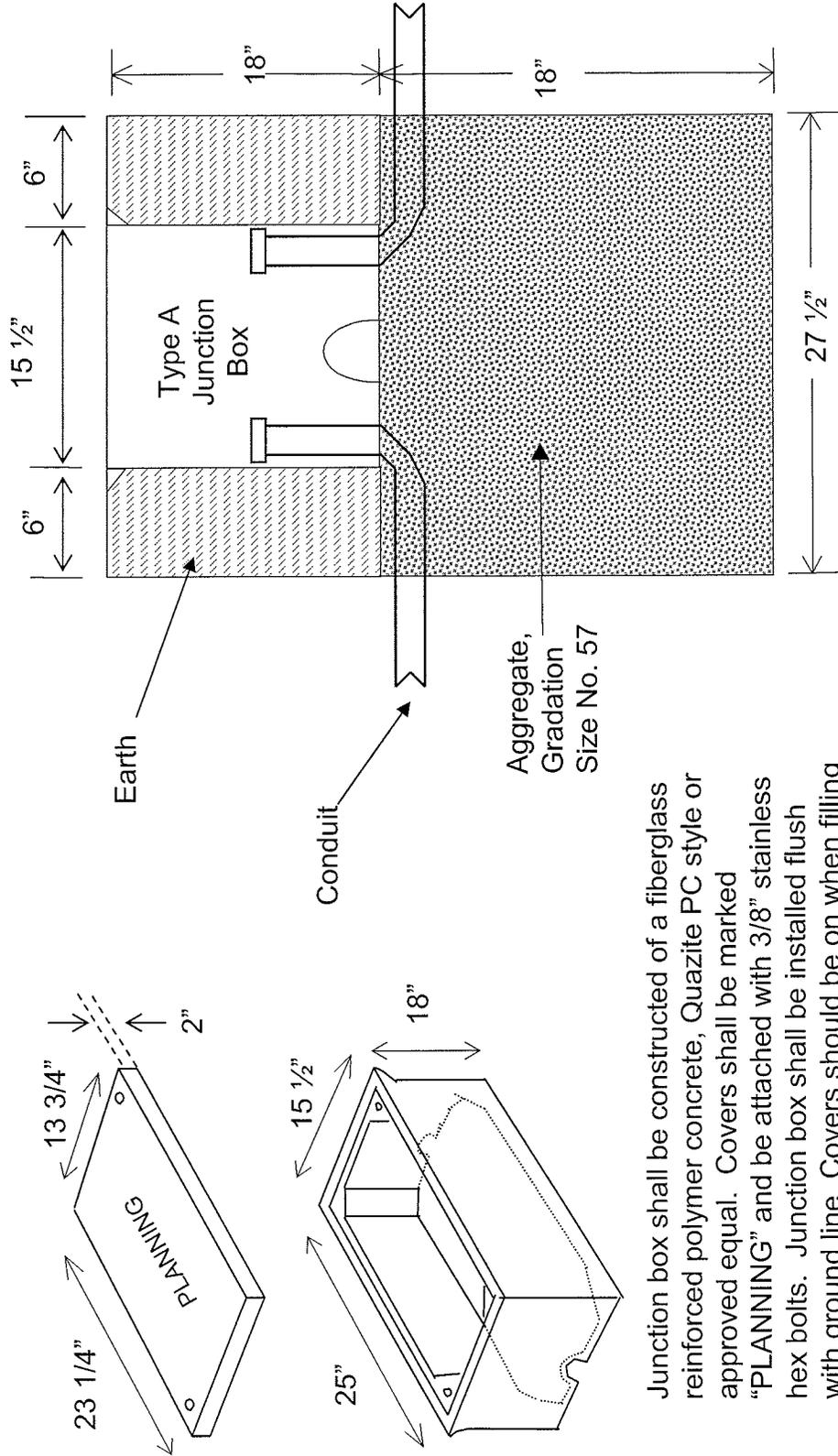
Figure 2b



02/27/06

Junction Box Type A Installation

Figure 3a



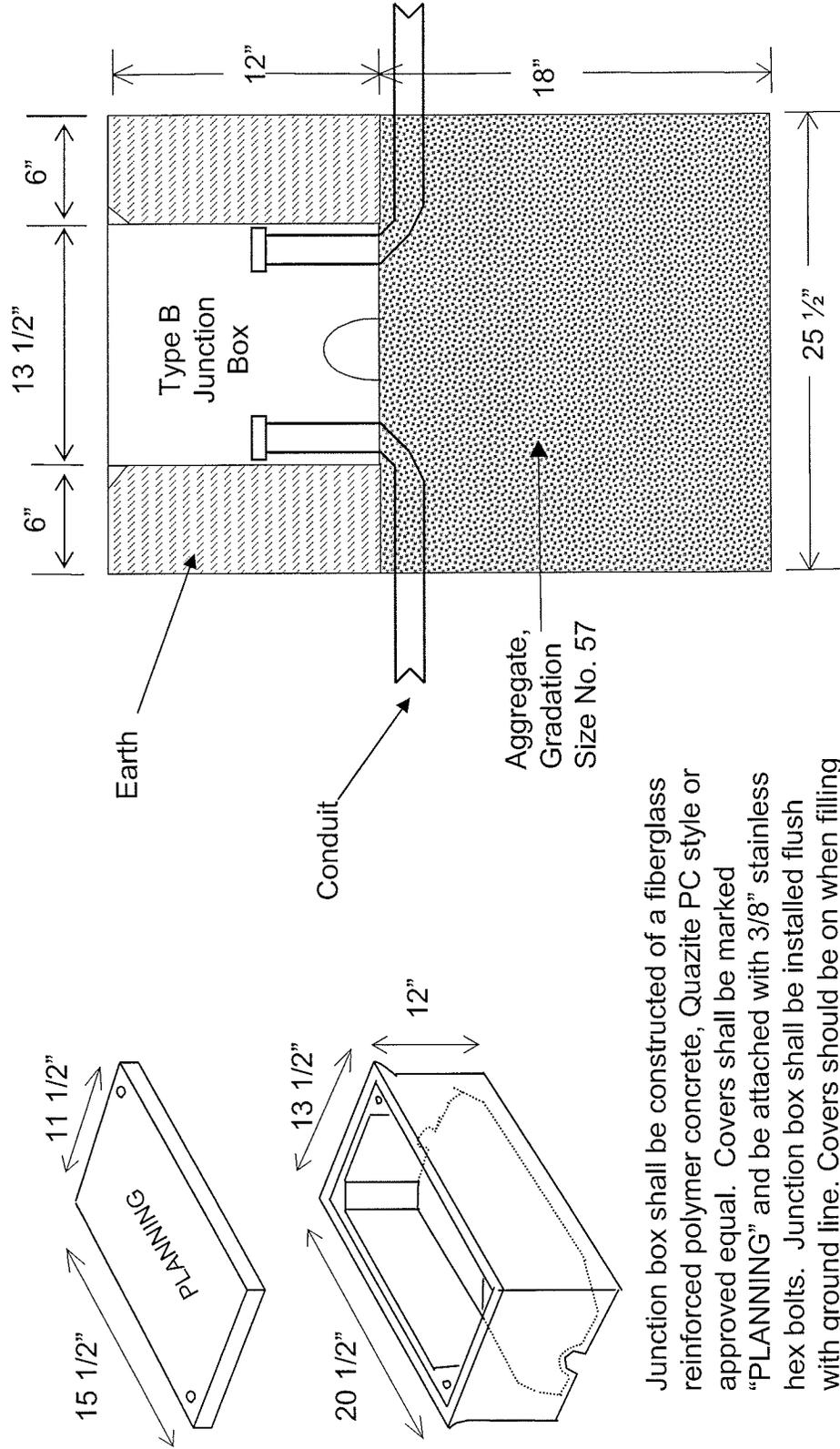
Junction box shall be constructed of a fiberglass reinforced polymer concrete, Quazite PC style or approved equal. Covers shall be marked "PLANNING" and be attached with 3/8" stainless hex bolts. Junction box shall be installed flush with ground line. Covers should be on when filling in around the box.

DRAWING NOT TO SCALE

02/23/06

Junction Box Type B Installation

Figure 3b



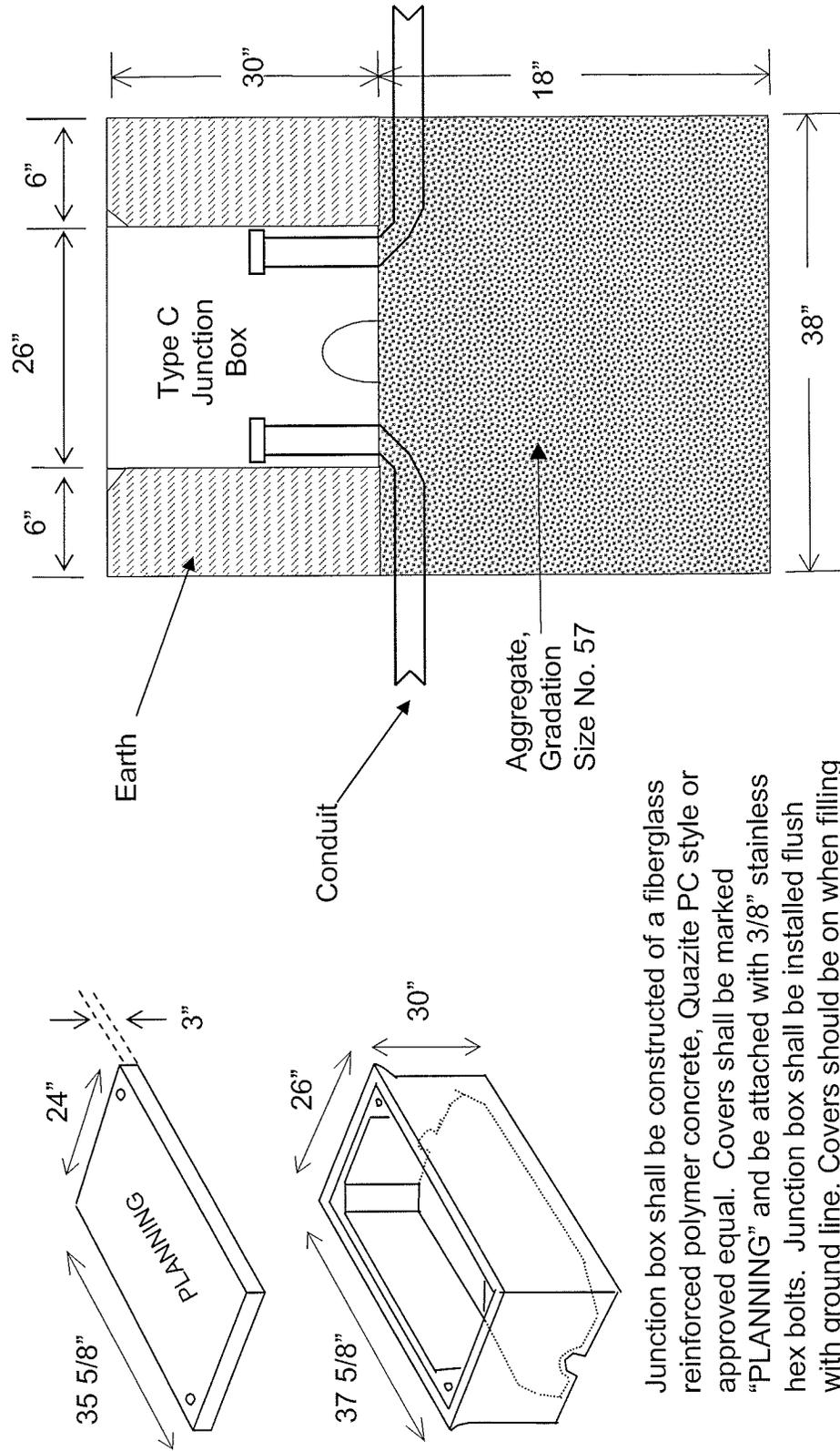
Junction box shall be constructed of a fiberglass reinforced polymer concrete, Quazite PC style or approved equal. Covers shall be marked "PLANNING" and be attached with 3/8" stainless hex bolts. Junction box shall be installed flush with ground line. Covers should be on when filling in around the box.

DRAWING NOT TO SCALE

02/23/06

Junction Box Type C Installation

Figure 3c



Junction box shall be constructed of a fiberglass reinforced polymer concrete, Quazite PC style or approved equal. Covers shall be marked "PLANNING" and be attached with 3/8" stainless hex bolts. Junction box shall be installed flush with ground line. Covers should be on when filling in around the box.

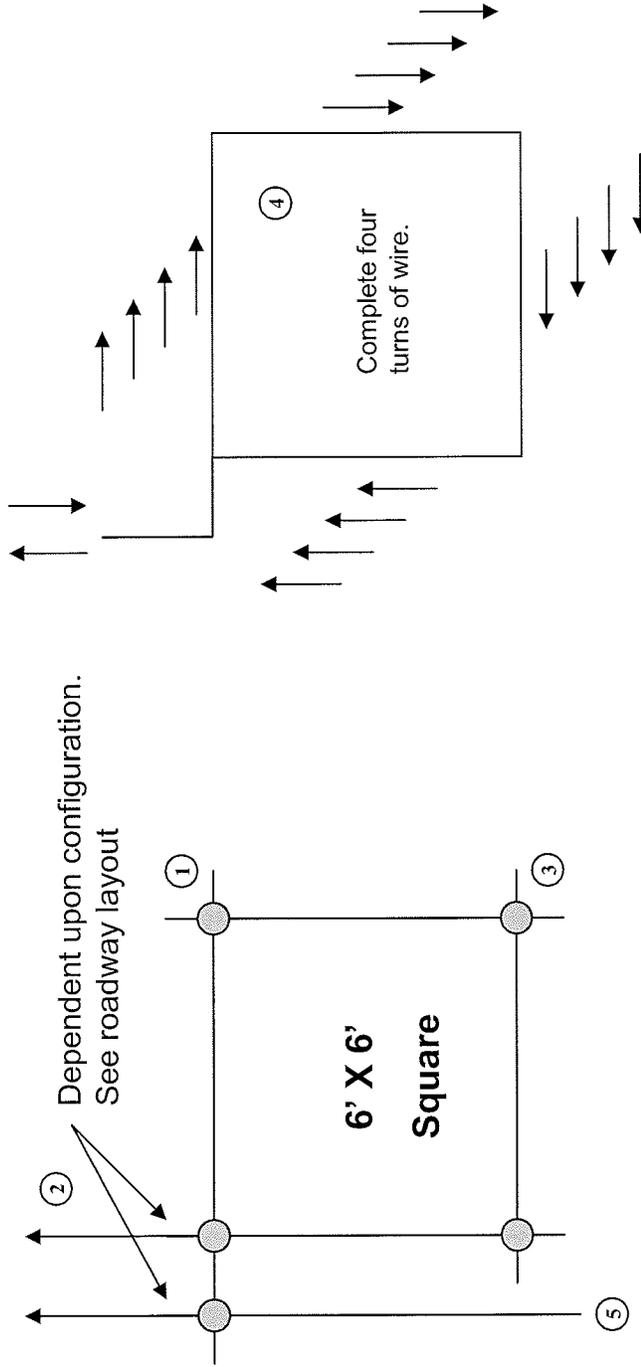
DRAWING NOT TO SCALE

02/23/06

Loop Installation Instructions

Loop Installation in Existing Roadways

Figure 4



Loop Wiring Plan

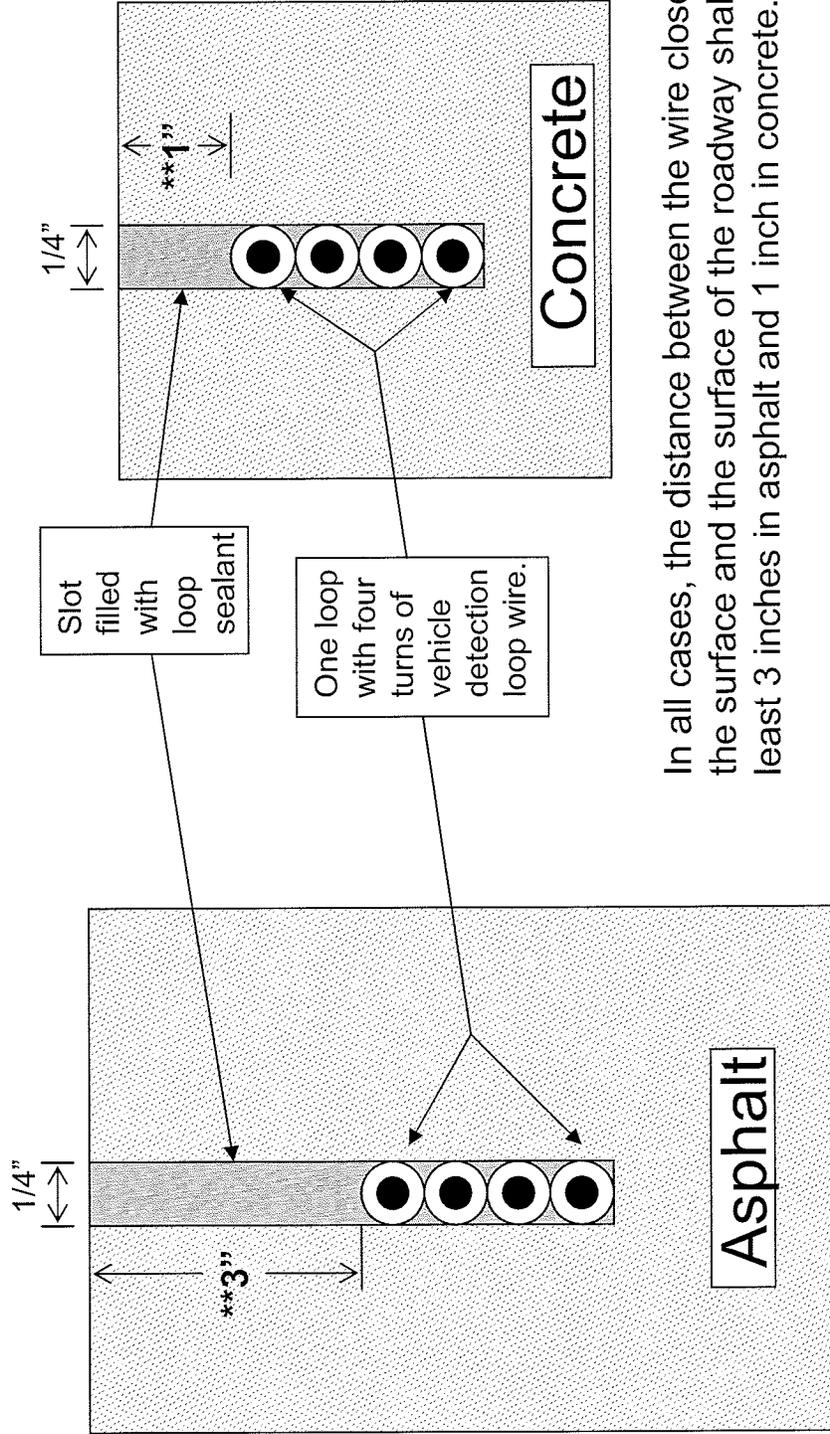
Saw Slot Plan

- Notes:**
- ① Overlap cuts so that slots are full depth at corners.
 - ② Configuration is dependent upon loop layout.
 - ③ Drill 1.5" hole in each corner to prevent sharp bends in the wire.
 - ④ Unless denoted otherwise, all loops are 6' x 6' square, positioned in center of lane with 4 turns of 14 AWG loop wire.
 - ⑤ The distance between adjacent loops is 6' for 12' lanes, 5.5' for 11' lanes, etc. It cannot be less than the loop is wide.

04/12/05

Loop Installation in Existing Roadway

Figure 5



In all cases, the distance between the wire closest to the surface and the surface of the roadway shall be at least 3 inches in asphalt and 1 inch in concrete.

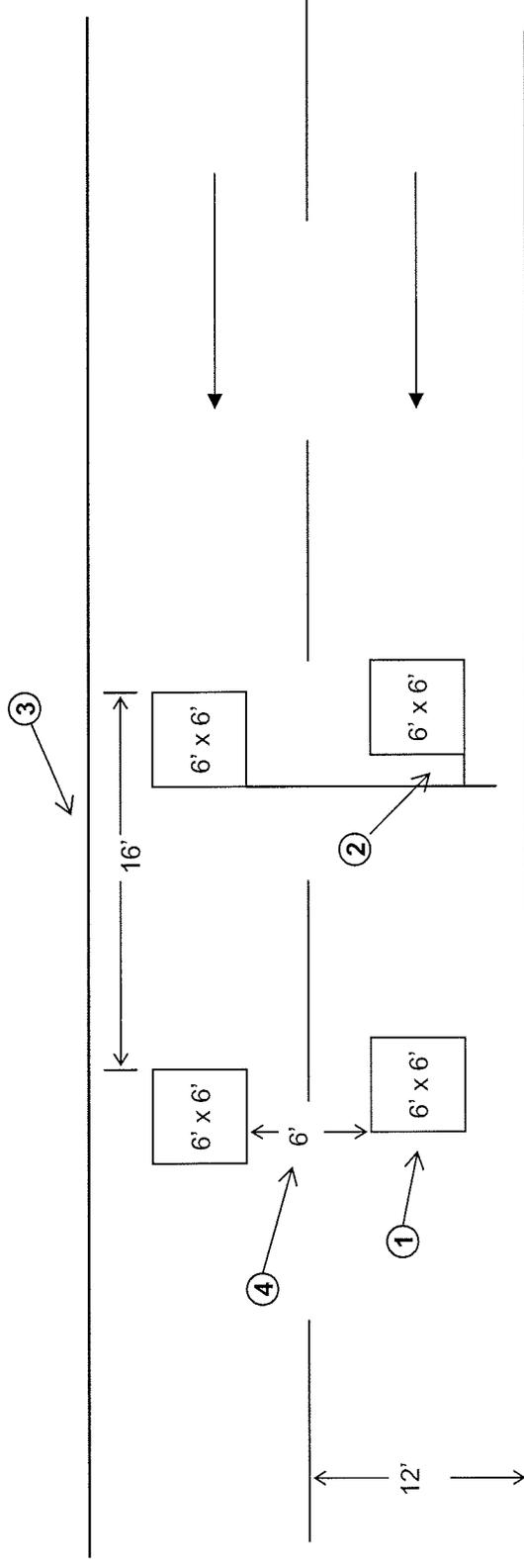
**Saw slot level shall be lowered at edge of roadway to meet the conduit level.

05/10/06

DRAWING NOT TO SCALE

Loop Characteristics

Figure 6

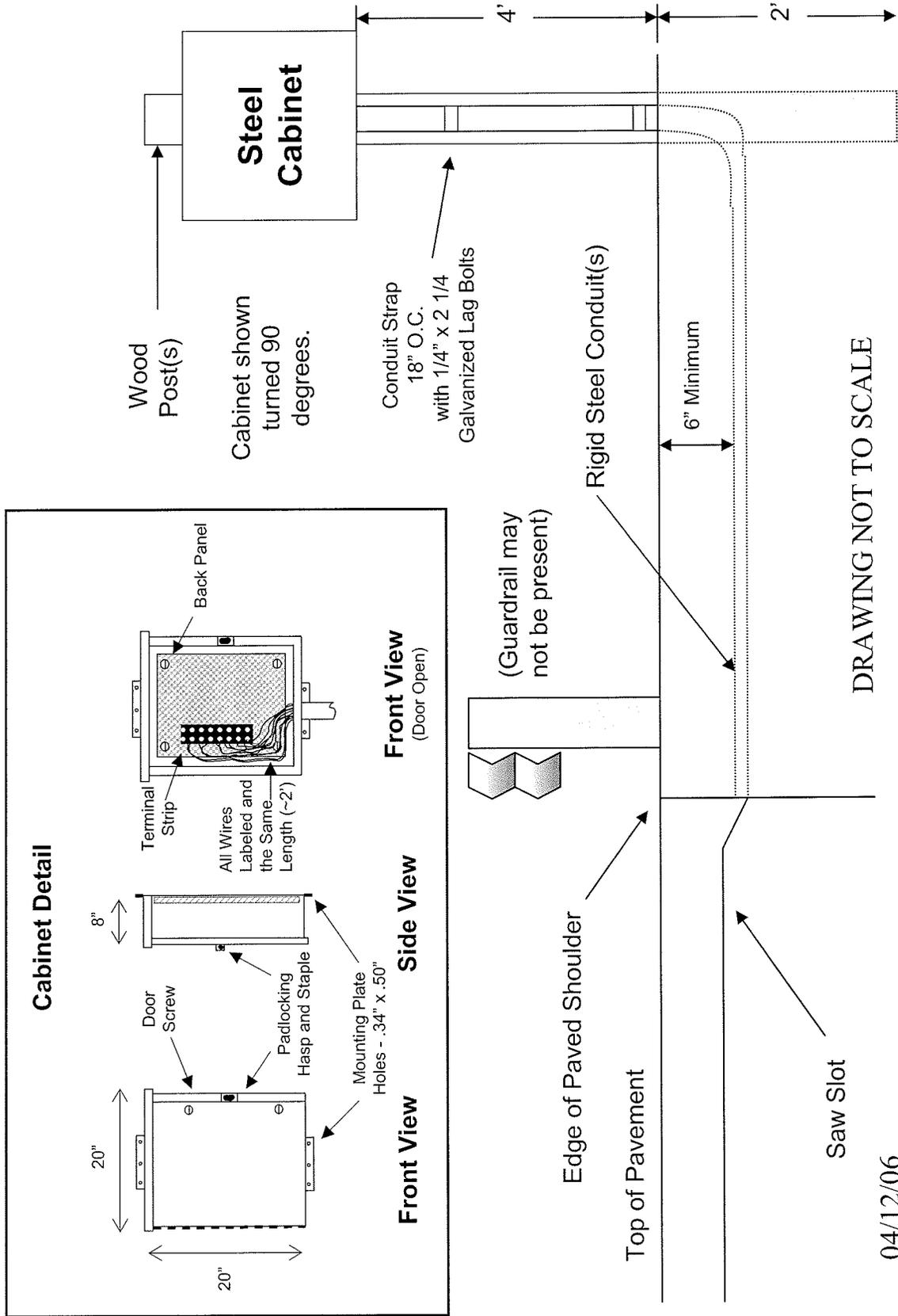


- ① Unless denoted otherwise, all loops are 6' x 6' square, positioned in center of lane with 4 turns of 14 AWG loop wire.
- ② Minimum 12" between loop and lead-ins. Lead-ins should be on the trailing edge of the loop.
- ③ If two loops are installed in a lane, space loops 16' from leading edge to leading edge unless denoted otherwise.
- ④ This distance is typically 6' for 12' lanes, 5.5' for 11' lanes, etc. It cannot be less than the loop is wide.

04/11/05

Galvanized Steel Cabinet and Post Installation

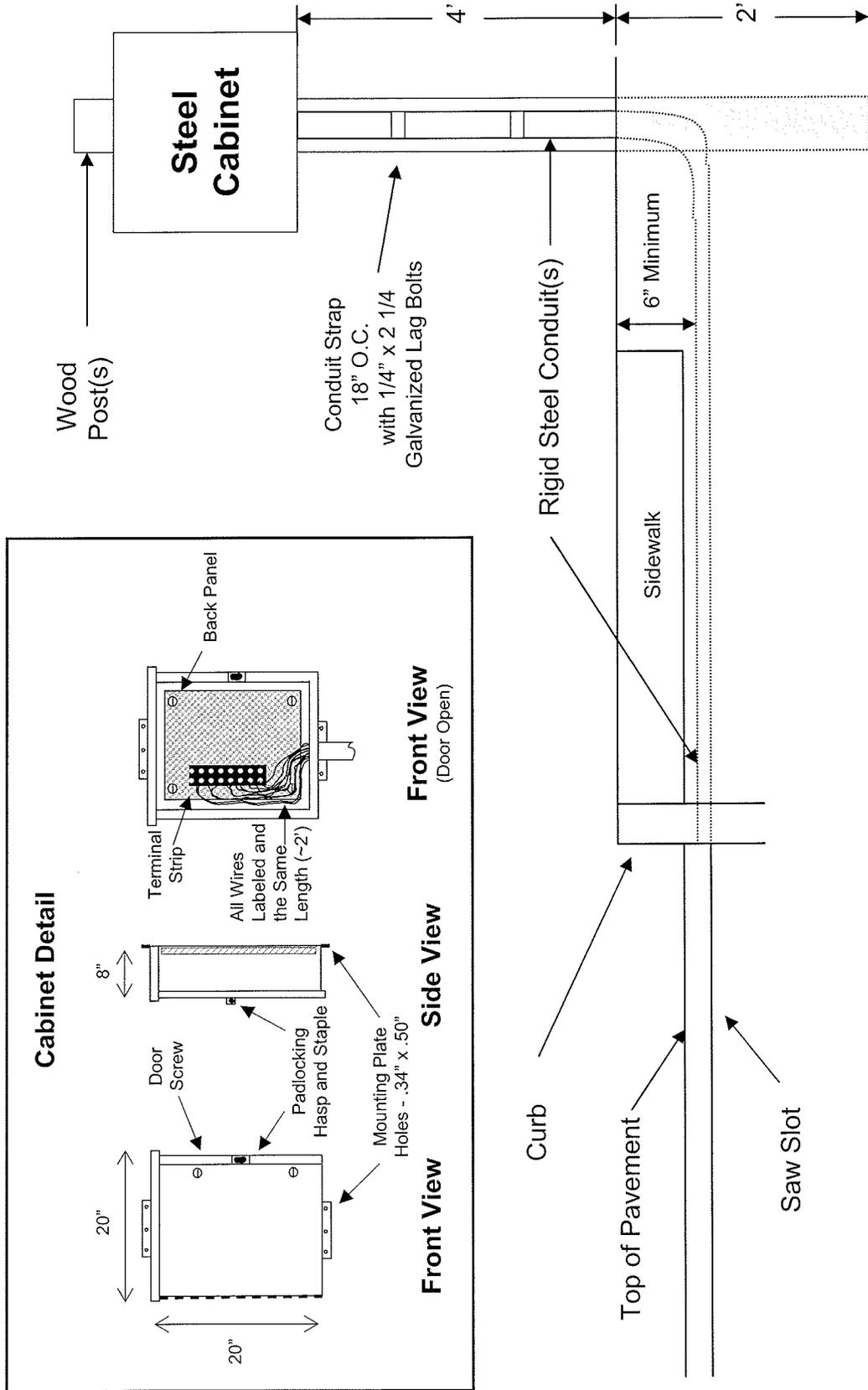
Figure 7a



04/12/06

Galvanized Steel Cabinet and Post Installation

Figure 7b

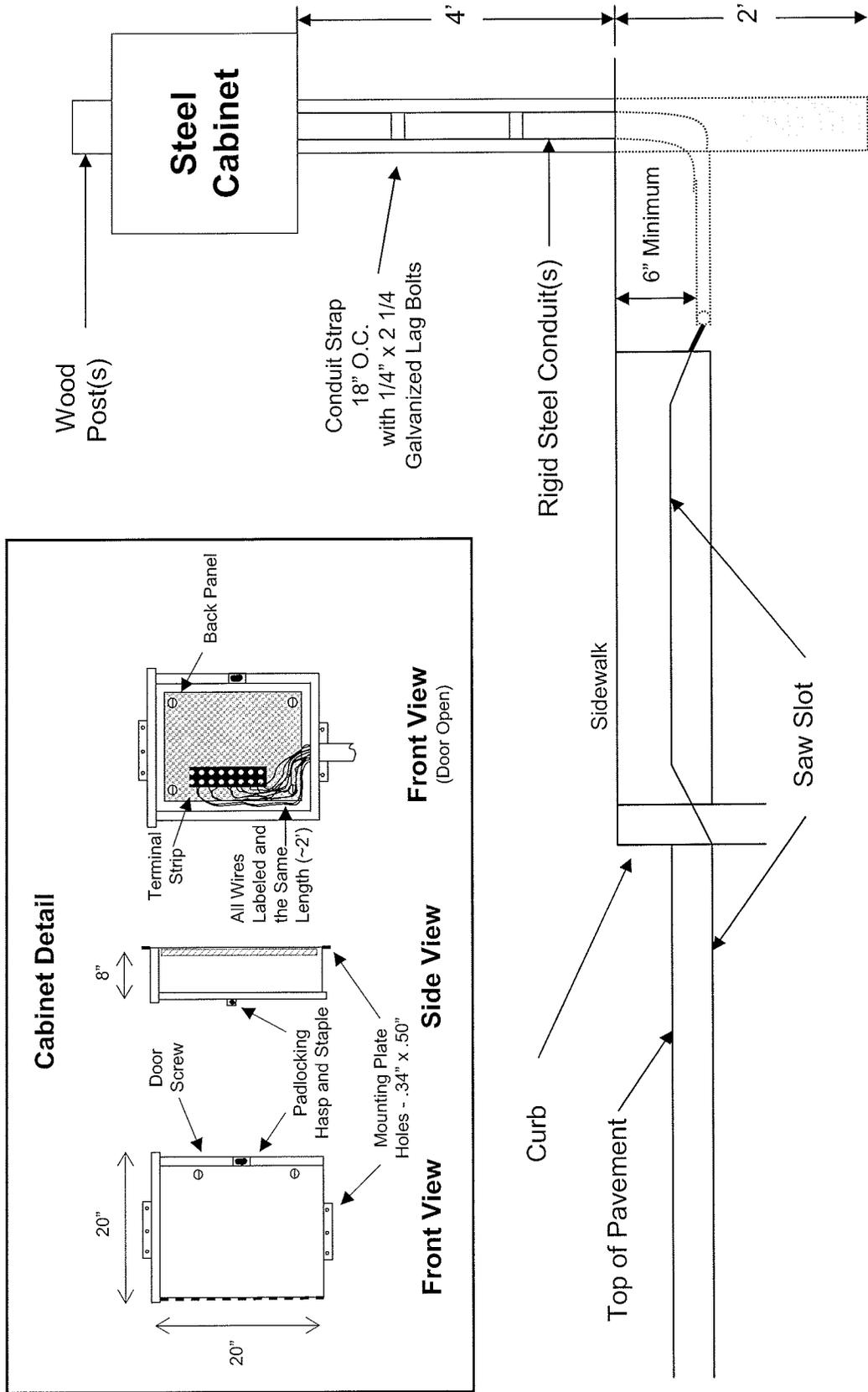


DRAWING NOT TO SCALE

02/25/05

Galvanized Steel Cabinet and Post Installation

Figure 7c

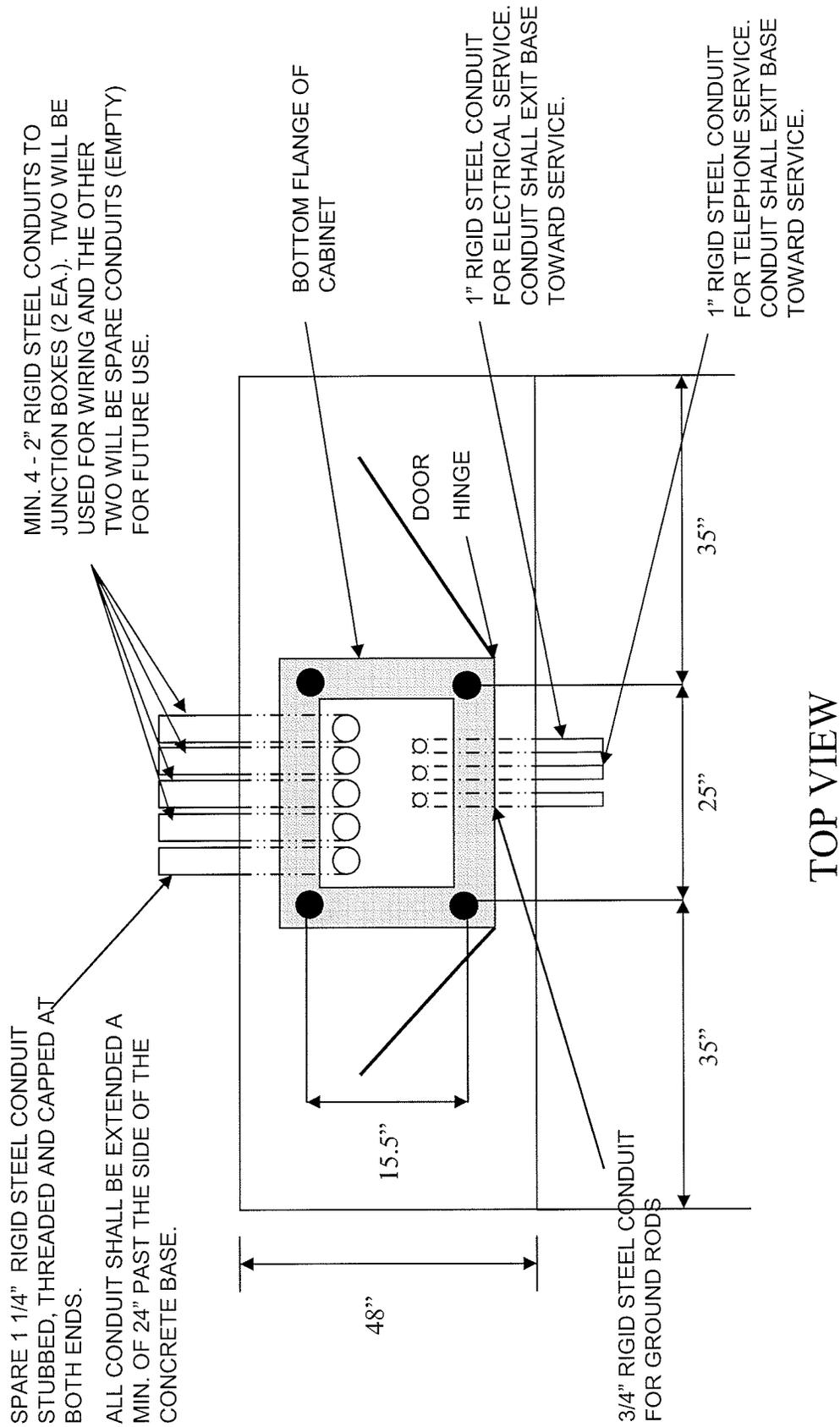


DRAWING NOT TO SCALE

02/08/06

Base Mounted 170 Cabinet Detail

Figure 9a

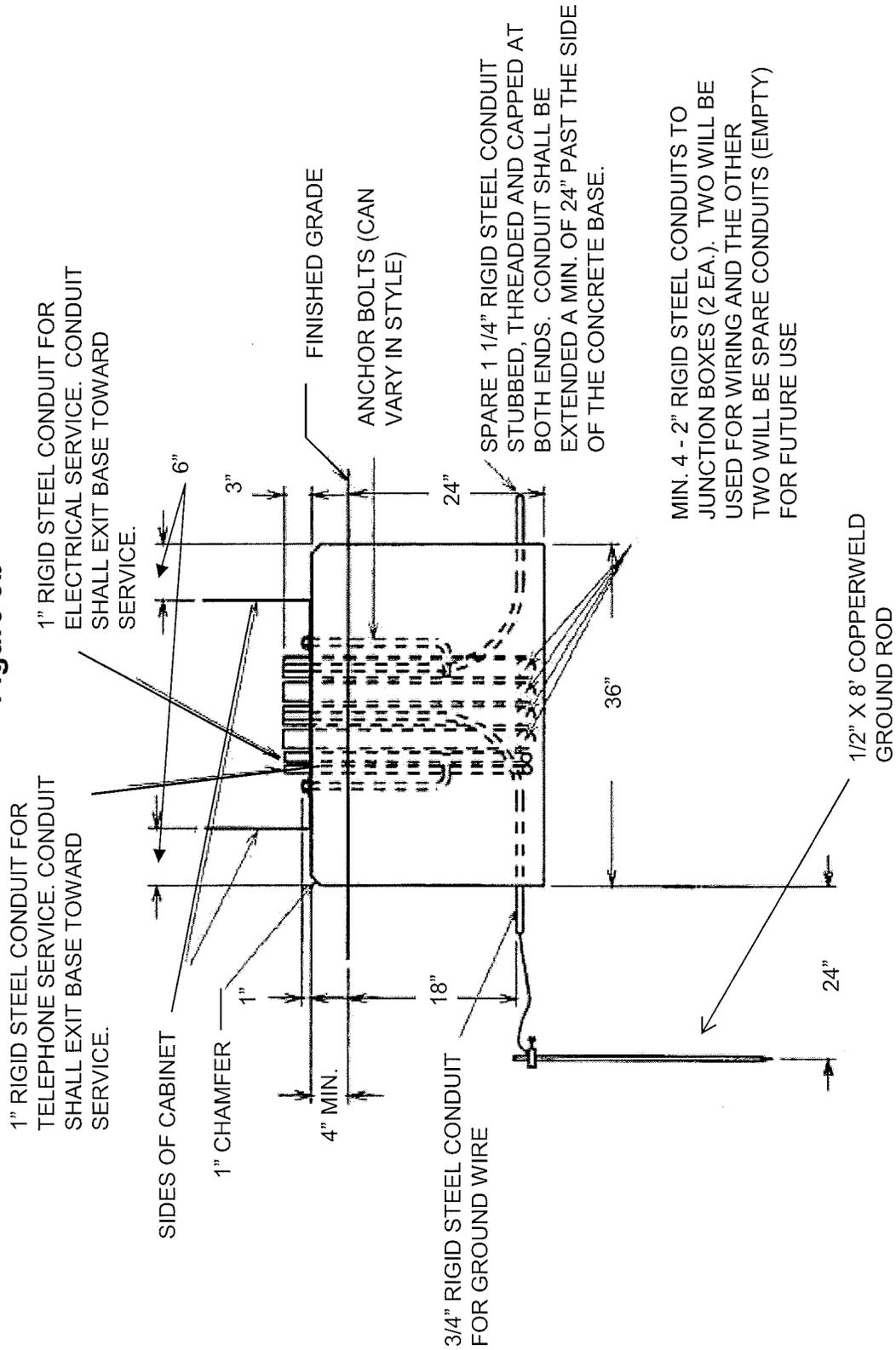


DRAWING NOT TO SCALE

02/15/05

Base Mounted 170 Cabinet Detail

Figure 9b



SIDE VIEW

DRAWING NOT TO SCALE

02/15/05

Right-of-Way Certification Form

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 Mega projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under conditions No. 2 & 3 outlined elsewhere in this form. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: March 23, 2009

Project #: FD52 056 82549 01D

Item #: 05-2045.00

County: Jefferson

Federal#: ARRA 264-1 (164)

Description of Project: Repair and grind pavement
On I-264 from MP 13.71 to MP 18.41

Letting Date: May 22, 2009

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

- X The proposed transportation improvement will be built within the existing rights-of-way and there are no properties to be acquired, individuals and families ("relocatees") to be relocated, or improvements to be removed as 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 relocates have been relocated decent, safe, and sanitary housing or that KYTC has made available to relocates 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)**
- 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 these improvements and enter all land. **Fair market value has been paid or deposited with the court.**
- 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 an interlocutory judgment has been granted, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish these 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 start of construction. (See note.)**

Right - of - Way Certification Form

Project #: FD52 056 82549 01D
Item #: 05-2045.00

County: Jefferson
Federal#: ARRA 264-1 (164)
Description of Project: Repair and grind pavement
On I-264 from MP 13.71 to MP 18.41

Letting Date: May 22, 2009

Note: The KYTC shall re-submit a right-of-way re-certification form for this project prior to the start of construction (**Notice to proceed**), verifying that fair market value for all parcels has been paid or deposited with the court.

- 3. The acquisition or right of company and use of 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 physical construction 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 at the start of construction. KYTC will fully meet requirements outline in 23 CFR 309(c) (3) and 49 CFR 102(j) and will expedite completion of all acquisitions, relocations, and full payments after construction starts. 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 consideration and approval. (see note.)

Note: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to construction of projects on this basis shall be the exception and never become rule. In all FHWA-approved cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocates promptly 30 days after start of construction.

Approved: Brian Meade
Printed Name

March 23, 2009 District ROW Supervisor
Approved

Approved: *Ralph ...*
Printed Name

4/13/09 Director of ROW & Utilities or Designee
Approved

Approved: *Gilberto DeLeon*
Printed Name

4/15/09 FHWA, Right-of-Way Officer
Approved

Right-of-Way Certification Form

Project #: FD52 056 82549 01D
Item #: 05-2045.00

County: Jefferson
Federal#: ARRA 264-1 (164)
Description of Project: Repair and grind pavement
On I-264 from MP 13.71 to MP 18.41

Letting Date: May 22, 2009

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

- Parcels were acquired by a signed fee simple deed and fair market value has been paid (**Type 1**)
- Parcels have been acquired through condemnation and IOJ granted by the court and fair market value has been deposited with the court (**Type 1 Certification**)
- Parcels have not been acquired at this time but can be re-certified as acquired prior to notice to proceed for construction. (Explain below for each parcel) (**Type 2 Certification**)
- Parcels have been acquired or have a "right of entry" but the fair market value has not been paid or has not been posted with the court, and they can not be re-certified prior to construction. (These parcels require and explanation below for each one as well as FHWA approval. (**Type 3 only**))
- Some displaces have not been relocated from all parcels: (explain below for each parcel) (**notes to plans may be required**)

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

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

**JEFFERSON COUNTY
Pavement Rehab on I-264 from MP 13.71 to MP 18.41
Item No. 5-2045.00**

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities. If conflicts do arise, it is the responsibility of the contractor to verify the location of the existing utilities and to arrive at appropriate resolutions with the Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The Kentucky Transportation Cabinet makes no guarantees regarding: the existence of utilities, the location of utilities, the utility companies in the project scope, or the potential for conflicts encountered during construction. The location of utilities provided herein 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.

The contractor is advised to contact the "BUD" one-call system; the Contractor should be aware that owners of underground facilities are not required to be members of the "BUD" one-call system. It may be necessary for the Contractor to contact the County Court Clerk to determine what utility companies have facilities in the project area.

SEPTEMBER 2009 LETTING

**KENTUCKY TRANSPORTATION CABINET
COMMUNICATING ALL PROMISES (CAP)**

JEFFERSON COUNTY

5-2045.00

(NO CAPS INVOLVED IN PROJECT)

PART II
SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to the *Standard Specifications for Road and Bridge Construction, Edition of 2004*, and *Standard Drawings, Edition of 2000* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2008* and *Standard Drawings, Edition of 2003 with the 2008 Revision*.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 24, 2009 Letting)

<p>SUBSECTION: REVISION:</p>	<p>101.02 Abbreviations. Insert the following abbreviation and text into the section: KEPSC Kentucky Erosion Prevention and Sediment Control</p>
<p>SUBSECTION: REVISION:</p>	<p>101.03 Definitions. Replace the definition for Specifications – <i>Special Provisions</i> with the following: Additions and revisions to the Standard and Supplemental Specifications covering conditions peculiar to and individual project.</p>
<p>SUBSECTION: REVISION:</p>	<p>102.07.01 General. Replace the first sentence with the following: Submit the Bid Proposal on forms furnished on the Department internet website (http://transportation.ky.gov/contract/), including the Bid Packet and disk created from the Expedite Bidding Program.</p>
<p>SUBSECTION: REVISION:</p>	<p>102.07.02 Computer Bidding. Replace the first paragraph with the following: Subsequent to ordering a Bid Proposal for a specific project, use the Department’s Expedite Bidding Program on the internet website of the Department of Highways, Division of Construction Procurement (http://transportation.ky.gov/contract/). Download the bid file from the Department’s website to prepare a Bid Proposal for submission to the Department. Include the completed Bid Packet produced by the Expedite Bidding Program and submit it along with the disk created by said program. Replace the second paragraph with the following: In case of a dispute, the printed Bid Proposal and bid item sheets created by the Expedite Bidding Program take precedence over any bid submittal.</p>
<p>SUBSECTION: REVISION:</p>	<p>102.08 IRREGULAR BID PROPOSALS. Replace point four of the first paragraph with the following: 4) fails to submit a disk created from the Expedite Bidding Program. Replace point one of the second paragraph with the following: 1) when the Bid Proposal is on a form other than that furnished by the Department or printed from other than the Expedite Bidding Program, or when the form is altered or any part is detached; or</p>
<p>SUBSECTION: REVISION:</p>	<p>103.02 AWARD OF CONTRACT. Replace the first sentence of the third paragraph with the following: The Department will normally award the Contract within 10 working days after the date of receiving Bid Proposals unless the Department deems it best to hold the Bid Proposals of any or all bidders for a period not to exceed 60 calendar days for final disposition of award.</p>

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<p>SUBSECTION: 105.12 FINAL INSPECTION AND ACCEPTANCE OF WORK. REVISION:</p>	<p>Insert the following paragraphs after the first paragraph:</p> <p>Notify the Engineer when all electrical items are complete. A notice of the electrical work completion shall be made in writing to the Contractor. Electrical items will be inspected when the electrical work is complete and are not subject to waiting until the project as a whole has been completed. The Engineer will notify the Division of Traffic Operations within 3 days that all electrical items are complete and ready for a final inspection. A final inspection will be completed within 90 days after the Engineer notifies the Division of Traffic Operations of the electrical work completion.</p> <p>Energize all electrical items prior to notifying the Engineer that all electrical items are complete. Electrical items must remain operational until the Division of Traffic Operations has inspected and accepted the electrical portion of the project. Payment for the electrical service is the responsibility of the Contractor from the time the electrical items are energized until the Division of Traffic Operations has accepted the work.</p> <p>Complete all corrective work within 90 calendar days of receiving the original electrical inspection report. Notify the Engineer when all corrective work is complete. The Engineer will notify the Division of Traffic Operations that the corrective work has been completed and the project is ready for a follow-up inspection. Upon re-inspection, if additional corrective work is required, complete within the same 90 calendar day allowance. The Department will not include time between completion of the corrective work and the follow up electrical inspection(s). The 90 calendar day allowance is cumulative regardless of the number of follow-up electrical inspections required.</p> <p>The Department will assume responsibility for the electrical service on a project once the Division of Traffic Operations gives final acceptance of the electrical items on the project. The Department will also assume routine maintenance of those items. Any damage done to accepted electrical work items by other Contractors shall be the responsibility of the Prime Contractor. The Department will not be responsible for repairing damage done by other contractors during the construction of the remaining project.</p> <p>Failure to complete the electrical corrective work within the 90 calendar day allowance will result in penalties assessed to the project. Penalties will be assessed at ½ the rate of liquidated damages established for the contract.</p> <p>Delete the fifth paragraph from the section.</p>
<p>SUBSECTION: 105.13 CLAIM RESOLUTION PROCESS. REVISION:</p>	<p>Delete the last paragraph from the section.</p>
<p>SUBSECTION: 106.10 FIELD WELDER CERTIFICATION REQUIREMENTS. REVISION:</p>	<p>Insert the following sentence before the first sentence of the first paragraph:</p> <p>All field welding must be performed by a certified welder unless otherwise noted.</p>
<p>SUBSECTION: 112.03.11 Temporary Pavement Markings. PART: B) Placement and Removal of Temporary Striping. REVISION:</p>	<p>Replace the 2nd sentence of the first paragraph with the following:</p> <p>On interstates and parkways, and other roadways approved by the State Highway Engineer, install pavement striping that is 6 inches in width.</p>
<p>SUBSECTION: 112.03.12 Project Traffic Coordinator (PTC). REVISION:</p>	<p>Add the following at the end of the subsection:</p> <p>After October 1, 2008 the Department will require the PTC to have successfully completed the applicable qualification courses. Personnel that have not successfully completed the applicable courses by that date will not be considered qualified. Prior to October 1, 2008, conform to Subsection 108.06 A) and ensure the designated PTC has sufficient skill and experience to properly perform the task.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
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<p>SUBSECTION: REVISION:</p>	<p>206.03.02 Embankment Replace the last paragraph with the following:</p> <p>When rock roadbed is specified, construct the upper 2 feet of the embankment according to Subsection 204.03.09 A).</p>
<p>SUBSECTION: REVISION:</p>	<p>213.03.03 Inspection and Maintenance. Insert the following paragraph after the second paragraph:</p> <p>When the Contractor is required to obtain the KPDES permit, it is their responsibility to ensure compliance with the inspection and maintenance requirements of the permit. The Engineer will perform verification inspections a minimum of once per month and within 7 days of a ½ inch or greater rainfall event. The Engineer will document these inspections using Form TC 63-61 A. The Engineer will provide copies of the inspection only when improvements to the BMP's are required. Verification inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit. Initiate corrective action within 24 hours of any noted deficiency and complete the work within 5 days.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>213.03.05 Temporary Control Measures. F) Temporary Mulch. Replace the last sentence with the following:</p> <p>Place temporary mulch to an approximate 2-inch loose depth (2 tons per acre) and anchor it into the soil by mechanically crimping it into the soil surface or applying tackifier to provide a protective cover. Regardless of the anchoring method used, ensure the protective cover holds until disturbance is required or permanent controls are in installed.</p>
<p>SUBSECTION: REVISION:</p>	<p>303.05 PAYMENT. Replace the second paragraph of the section with the following:</p> <p>The Department will make payment for Drainage Blanket-Type II (ATDB) according to the Lot Pay Adjustment Schedule for Specialty Mixtures in Section 402.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>401.02.04 Special Requirements for Dryer Drum Plants. F) Production Quality Control. Replace the first sentence with the following:</p> <p>Stop mixing operations immediately if, at any time, a failure of the automatic electronic weighing system of the aggregate feed, asphalt binder feed, or water injection system control occurs.</p>
<p>SUBSECTION: REVISION:</p>	<p>401.02.04 Special Requirements for Dryer Drum Plants. Add the following:</p> <p>Part G) Water Injection System. Provided each system has prior approval as specified in Subsection 402.01.01, the Department will allow the use of water injection systems for purposes of foaming the asphalt binder and lowering the mixture temperature for production of Warm Mix Asphalt (WMA). Ensure the equipment for water injection meets the following requirements:</p> <ol style="list-style-type: none"> 1) Injection equipment computer controls are automatically coupled to the plants controls (manual operation is not permitted); 2) Injection equipment has variable controls that introduce water ratios based on production rates of mixtures; 3) Injects water into the flow of asphalt binder prior to contacting the aggregate; 4) Provides alarms on the water injection system that operate when the flow of water is interrupted or deviates from the prescribed water rate.
<p>SUBSECTION: REVISION:</p>	<p>401.03.01 Preparation of Mixtures. Replace the last sentence of the second paragraph with the following:</p> <p>Do not use asphalt binder while it is foaming in a storage tank.</p>

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SUBSECTION: REVISION:	<p>401.03.01 Preparation of Mixtures. Replace the third paragraph and Mixing and Laying Temperature table with the following:</p> <p>Maintain the temperature of the component materials and asphalt mixture within the ranges listed in the following table:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4" style="text-align: center;">MIXING AND LAYING TEMPERATURES (°F)</th> </tr> <tr> <th colspan="2" style="text-align: left;">Material</th> <th style="text-align: center;">Minimum</th> <th style="text-align: center;">Maximum</th> </tr> </thead> <tbody> <tr> <td colspan="2">Aggregates</td> <td style="text-align: center;">240</td> <td style="text-align: center;">330</td> </tr> <tr> <td colspan="2">Aggregates used with Recycled Asphalt Pavement (RAP)</td> <td style="text-align: center;">240</td> <td style="text-align: center;">—</td> </tr> <tr> <td rowspan="2">Asphalt Binders</td> <td>PG 64-22</td> <td style="text-align: center;">230</td> <td style="text-align: center;">330</td> </tr> <tr> <td>PG 76-22</td> <td style="text-align: center;">285</td> <td style="text-align: center;">350</td> </tr> <tr> <td rowspan="4">Asphalt Mixtures at Plant (Measured in Truck)</td> <td>PG 64-22 HMA</td> <td style="text-align: center;">250</td> <td style="text-align: center;">330</td> </tr> <tr> <td>PG 76-22 HMA</td> <td style="text-align: center;">310</td> <td style="text-align: center;">350</td> </tr> <tr> <td>PG 64-22 WMA</td> <td style="text-align: center;">230</td> <td style="text-align: center;">275</td> </tr> <tr> <td>PG 76-22 WMA</td> <td style="text-align: center;">250</td> <td style="text-align: center;">300</td> </tr> <tr> <td rowspan="4">Asphalt Mixtures at Project (Measured in Truck When Discharging)</td> <td>PG 64-22 HMA</td> <td style="text-align: center;">230</td> <td style="text-align: center;">330</td> </tr> <tr> <td>PG 76-22 HMA</td> <td style="text-align: center;">300</td> <td style="text-align: center;">350</td> </tr> <tr> <td>PG 64-22 WMA</td> <td style="text-align: center;">210</td> <td style="text-align: center;">275</td> </tr> <tr> <td>PG 76-22 WMA</td> <td style="text-align: center;">240</td> <td style="text-align: center;">300</td> </tr> </tbody> </table>	MIXING AND LAYING TEMPERATURES (°F)				Material		Minimum	Maximum	Aggregates		240	330	Aggregates used with Recycled Asphalt Pavement (RAP)		240	—	Asphalt Binders	PG 64-22	230	330	PG 76-22	285	350	Asphalt Mixtures at Plant (Measured in Truck)	PG 64-22 HMA	250	330	PG 76-22 HMA	310	350	PG 64-22 WMA	230	275	PG 76-22 WMA	250	300	Asphalt Mixtures at Project (Measured in Truck When Discharging)	PG 64-22 HMA	230	330	PG 76-22 HMA	300	350	PG 64-22 WMA	210	275	PG 76-22 WMA	240	300
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SUBSECTION: REVISION:	<p>402.01 Description. Replace the paragraph with the following:</p> <p>Provide the process control and acceptance testing of all classes and types of asphalt mixtures which may be furnished either as hot mix asphalt (HMA) or warm mix asphalt (WMA) produced with water injection systems.</p>																																																	
SUBSECTION REVISION:	<p>402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval. Add the following subsection:</p> <p>402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval. The Department will evaluate trial production of WMA by use of a water injection system provided the system is installed according to the manufacturer's requirements and satisfies the requirements of Section 401. Evaluation will include production and placement of WMA to demonstrate adequate mixture quality including volumetric properties and density by Option A as specified in Subsection 402.03.02 D). Do not place WMA for evaluation on Department projects. Provided production and placement operations satisfy the applicable quality levels, the Department will approve WMA production on Department projects using the water injection system as installed on the specific asphalt mixing plant evaluated.</p>																																																	
SUBSECTION: REVISION:	<p>402.05.02 Asphalt Mixtures and Mixtures With RAP. Replace Subsection Title as below:</p> <p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.</p>																																																	
SUBSECTION: REVISION:	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Replace the paragraph with the following:</p> <p>The Department will pay for the mixture at the Contract unit bid price and apply a Lot Pay Adjustment for each lot placed based on the degree of compliance with the specified tolerances. Using the appropriate Lot Pay Adjustment Schedule, the Department will assign a pay value for the applicable properties within each subplot and average the subplot pay values to determine the pay value for a given property for each lot. The Department will apply the Lot Pay Adjustment for each lot to a defined unit price of \$50.00 per ton. The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>																																																	

**Supplemental Specifications to The Standard Specifications
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<p>SUBSECTION: PART: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. C) Conventional and RAP Mixtures Placed on Shoulders. Replace title with the following: HMA, WMA, and RAP Mixtures Placed on Shoulders.</p>												
<p>SUBSECTION: PART: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. D) Conventional and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge. Replace the title with the following: HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.</p>												
<p>SUBSECTION: PART: TABLES: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option A, Base and Binder Mixtures VMA Replace the VMA table with the following:</p> <table border="1"> <thead> <tr> <th colspan="2">VMA</th> </tr> <tr> <th>Pay Value</th> <th>Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td>1.00</td> <td>≥ min. VMA</td> </tr> <tr> <td>0.95</td> <td>0.1-0.5 below min.</td> </tr> <tr> <td>0.90</td> <td>0.6-1.0 below min.</td> </tr> <tr> <td>⁽¹⁾</td> <td>> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥ min. VMA	0.95	0.1-0.5 below min.	0.90	0.6-1.0 below min.	⁽¹⁾	> 1.0 below min.
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<p>SUBSECTION: PART: TABLES: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option A, Surface Mixtures VMA Replace the VMA table with the following:</p> <table border="1"> <thead> <tr> <th colspan="2">VMA</th> </tr> <tr> <th>Pay Value</th> <th>Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td>1.00</td> <td>≥ min. VMA</td> </tr> <tr> <td>0.95</td> <td>0.1-0.5 below min.</td> </tr> <tr> <td>0.90</td> <td>0.6-1.0 below min.</td> </tr> <tr> <td>⁽¹⁾</td> <td>> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥ min. VMA	0.95	0.1-0.5 below min.	0.90	0.6-1.0 below min.	⁽¹⁾	> 1.0 below min.
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<p>SUBSECTION: PART: TABLE: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option B Mixtures VMA Replace the VMA table with the following:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">VMA</th> </tr> <tr> <th style="text-align: center;">Pay Value</th> <th style="text-align: center;">Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.00</td> <td style="text-align: center;">≥min. VMA</td> </tr> <tr> <td style="text-align: center;">0.95</td> <td style="text-align: center;">0.1-0.5 below min.</td> </tr> <tr> <td style="text-align: center;">0.90</td> <td style="text-align: center;">0.6-1.0 below min.</td> </tr> <tr> <td style="text-align: center;">⁽²⁾</td> <td style="text-align: center;">> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥min. VMA	0.95	0.1-0.5 below min.	0.90	0.6-1.0 below min.	⁽²⁾	> 1.0 below min.											
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<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>403.03.03 Preparation of Mixture. C) Mix Design Criteria. 1) Preliminary Mix Design. Replace the last two sentences of the paragraph and table with the following:</p> <p>Complete the volumetric mix design at the appropriate number of gyrations as given in the table below for the number of 20-year ESAL's. The Department will define the relationship between ESAL classes, as given in the bid items for Superpave mixtures, and 20-year ESAL ranges as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Class</th> <th rowspan="2" style="text-align: center;">ESAL's (millions)</th> <th colspan="3" style="text-align: center;">Number of Gyration</th> </tr> <tr> <th style="text-align: center;">$N_{initial}$</th> <th style="text-align: center;">N_{design}</th> <th style="text-align: center;">N_{max}</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">< 3.0</td> <td style="text-align: center;">6</td> <td style="text-align: center;">50</td> <td style="text-align: center;">75</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">3.0 to < 30.0</td> <td style="text-align: center;">7</td> <td style="text-align: center;">75</td> <td style="text-align: center;">115</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">≥ 30.0</td> <td style="text-align: center;">8</td> <td style="text-align: center;">100</td> <td style="text-align: center;">160</td> </tr> </tbody> </table>	Class	ESAL's (millions)	Number of Gyration			$N_{initial}$	N_{design}	N_{max}	2	< 3.0	6	50	75	3	3.0 to < 30.0	7	75	115	4	≥ 30.0	8	100	160
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<p>SUBSECTION: PART: REVISION:</p>	<p>403.03.09 Leveling and Wedging, and Scratch Course. A) Leveling and Wedging. Replace the first sentence of the first paragraph with the following:</p> <p>Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.</p>																							
<p>SUBSECTION: PART: REVISION:</p>	<p>403.03.09 Leveling and Wedging, and Scratch Course. B) Scratch Course. Replace the second sentence of the first paragraph with the following:</p> <p>Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>407.01 DESCRIPTION. Replace the first sentence of the paragraph with the following:</p> <p>Construct a pavement wedge composed of a hot-mixed or warm-mixed asphalt mixture.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>409.01 DESCRIPTION. Replace the first sentence of the paragraph with the following:</p> <p>Use reclaimed asphalt pavement (RAP) from Department projects or other approved sources in hot mix asphalt (HMA) or warm mix asphalt (WMA) provided mixture requirements are satisfied.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>410.01 DESCRIPTION. Delete the second sentence of the paragraph.</p>																							

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<p>SUBSECTION: REVISION:</p>	<p>410.03.01 Corrective Work. Replace the last sentence of the paragraph with the following: Provide a final surface comparable to the adjacent pavement that does not require corrective work in respect to texture, appearance, and skid resistance.</p>														
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>410.03.02 Ride Quality. B) Requirements. 1) Category A. Replace the last sentence of the first paragraph with the following: At the Department's discretion, a pay deduction of \$1200 per 0.1-lane-mile section may be applied in lieu of corrective work.</p>														
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>410.03.02 Ride Quality. B) Requirements. 2) Category B. Replace the second and third sentence of the first paragraph with the following: When the IRI is greater than 90 for a 0.1-mile section, perform corrective work, or remove and replace the pavement to achieve the specified IRI. At the Department's discretion, a pay deduction of \$750 per 0.1-lane-mile section may be applied in lieu of corrective work.</p>														
<p>SUBSECTION: REVISION:</p>	<p>410.05 PAYMENT. Add the following sentence to the end of the first paragraph: The sum of the pay value adjustments for ride quality shall not exceed \$0 for the project as a whole.</p>														
<p>SUBSECTION: REVISION:</p>	<p>413.05.02 CL3 SMA BASE 1.00D PG76-22. Insert the following sentence between the first and second sentence of the first paragraph: The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>														
<p>SUBSECTION: TABLE: REVISION:</p>	<p>413.05.02 CL3 SMA BASE 1.00D PG 76-22. JOINT DENSITY TABLE Replace the joint density table with the following:</p> <table border="1"> <thead> <tr> <th colspan="2">LANE DENSITY</th> </tr> <tr> <th>Pay Value</th> <th>Test Result (%)</th> </tr> </thead> <tbody> <tr> <td>1.05</td> <td>95.0-96.5</td> </tr> <tr> <td>1.00</td> <td>93.0-94.9</td> </tr> <tr> <td>0.95</td> <td>92.0-92.9 or 96.6-97.0</td> </tr> <tr> <td>0.90</td> <td>91.0-91.9 or 97.1-97.5</td> </tr> <tr> <td>⁽¹⁾</td> <td>< 91.0 or > 97.5</td> </tr> </tbody> </table>	LANE DENSITY		Pay Value	Test Result (%)	1.05	95.0-96.5	1.00	93.0-94.9	0.95	92.0-92.9 or 96.6-97.0	0.90	91.0-91.9 or 97.1-97.5	⁽¹⁾	< 91.0 or > 97.5
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<p>SUBSECTION: REVISION:</p>	<p>413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22. Insert the following sentence between the first and second sentence of the first paragraph: The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>														

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<p>SUBSECTION: TABLE: REVISION:</p>	<p>413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22. JOINT DENSITY TABLE Replace the joint density table with the following:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3" style="text-align: center;">DENSITY</th> </tr> <tr> <th style="text-align: center;">Pay Value</th> <th style="text-align: center;">Lane Density Test Result (%)</th> <th style="text-align: center;">Joint Density Test Result (%)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.05</td> <td style="text-align: center;">95.0-96.5</td> <td style="text-align: center;">92.0-96.0</td> </tr> <tr> <td style="text-align: center;">1.00</td> <td style="text-align: center;">93.0-94.9</td> <td style="text-align: center;">90.0-91.9</td> </tr> <tr> <td style="text-align: center;">0.95</td> <td style="text-align: center;">92.0-92.9 or 96.6-97.0</td> <td style="text-align: center;">89.0-89.9 or 96.1-96.5</td> </tr> <tr> <td style="text-align: center;">0.90</td> <td style="text-align: center;">91.0-91.9 or 97.1-97.5</td> <td style="text-align: center;">88.0-88.9 or 96.6-97.0</td> </tr> <tr> <td style="text-align: center;">0.75</td> <td style="text-align: center;">----</td> <td style="text-align: center;">< 88.0 or > 97.0</td> </tr> <tr> <td style="text-align: center;"><i>(1)</i></td> <td style="text-align: center;">< 91.0 or > 97.5</td> <td style="text-align: center;">----</td> </tr> </tbody> </table>	DENSITY			Pay Value	Lane Density Test Result (%)	Joint Density Test Result (%)	1.05	95.0-96.5	92.0-96.0	1.00	93.0-94.9	90.0-91.9	0.95	92.0-92.9 or 96.6-97.0	89.0-89.9 or 96.1-96.5	0.90	91.0-91.9 or 97.1-97.5	88.0-88.9 or 96.6-97.0	0.75	----	< 88.0 or > 97.0	<i>(1)</i>	< 91.0 or > 97.5	----
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<p>SUBSECTION: REVISION:</p>	<p>501.05.02 Ride Quality. Add the following sentence to the end of the first paragraph: The sum of the pay value adjustments for the ride quality shall not exceed \$0 for the project as a whole.</p>																								
<p>SUBSECTION: REVISION:</p>	<p>505.03.04 Detectable Warnings. Replace the first sentence with the following: Install detectable warning pavers at all sidewalk ramps and on all commercial entrances according to the Standard Drawings.</p>																								
<p>SUBSECTION: REVISION:</p>	<p>505.04.04 Detectable Warnings. Replace the paragraph with the following: The Department will measure the quantity in square feet. All retrofit applications for maintenance projects will require the removal of existing sidewalks to meet the requirements of the standard drawings applicable to the project. The cost associated with the removal of the existing sidewalk will be incidental to the detectable warnings bid item or incidental to the bid item for the construction of the concrete sidewalk unless otherwise noted.</p>																								
<p>SUBSECTION: REVISION:</p>	<p>505.05 PAYMENT. Add the following to the bid item table:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><u>Code</u></th> <th style="text-align: left;"><u>Pay Item</u></th> <th style="text-align: left;"><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>23158ES505</td> <td>Detectable Warnings</td> <td>Square Foot</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	23158ES505	Detectable Warnings	Square Foot																		
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<p>SUBSECTION: REVISION:</p>	<p>509.01 DESCRIPTION. Replace the second paragraph with the following: The Department may allow the use of similar units that conform to the National Cooperative Highway Research Program (NCHRP) 350 Test Level 3 (TL-3) requirements and the typical features depicted by the Standard Drawings. Obtain the Engineers approval prior to use. Ensure the barrier wall shape, length, material, drain slot dimensions and locations typical features are met and the reported maximum deflection is 3 feet or less from the NCHRP 350 TL-3 for Test 3 – 11 (pickup truck impacting at 60 mph at a 25-degree angle.)</p>																								
<p>SUBSECTION: REVISION:</p>	<p>601.03.02 Concrete Producer Responsibilities. Add the following to the first paragraph: If a concrete plant becomes unqualified during a project and there are no other qualified plants in the region, the Department will provide qualified personnel to witness and ensure the producer follows the required specifications. The Department will assess the Contractor a \$100 per hour charge for this service.</p>																								

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<p>SUBSECTION: REVISION:</p>	<p>606.02.11 Coarse Aggregate. Replace with the following: Conform to Section 805, size No. 8 or 9-M.</p>
<p>SUBSECTION: REVISION:</p>	<p>609.04.06 Joint Sealing. Replace Subsection 601.04 with the following: Subsection 606.04.08.</p>
<p>SUBSECTION: REVISION:</p>	<p>609.05 Payment. Replace the Pay Unit for Joint Sealing with the following: See Subsection 606.05.</p>
<p>SUBSECTION: REVISION:</p>	<p>701.03.06 Initial Backfill. Replace the first sentence of the last paragraph with the following: When the Contract specifies, perform quality control testing to verify compaction according to KM 64-512.</p>
<p>SUBSECTION: REVISION:</p>	<p>701.03.08 Testing of Pipe. Replace and rename the subsection with the following:</p> <p style="padding-left: 40px;">701.03.08 Inspection of Pipe. The engineer will visually inspect all pipe. The Department will require camera/video inspection on a minimum of 50 percent of the linear feet of all installed pipe structures. Conduct camera/video inspection according to KM 64-114. The pipe to be installed under pavement will be selected first. If the total linear feet of pipe under pavement is less than 50 percent of the linear feet of all pipe installed, the Engineer will randomly select installations from the remaining pipe structures on the project to provide for the minimum inspection requirement. The pipe will be selected in complete runs (junction-junction or headwall-headwall) until the total linear feet of pipe to be inspected is at least 50 percent of the total linear feet of all installed pipe on the project.</p> <p style="padding-left: 40px;">Unless the Engineer directs otherwise, schedule the inspections no sooner than 30 days after completing the installation and completion of earthwork to within 1 foot of the finished subgrade. When final surfacing conflicts with the 30-day minimum, conduct the inspections prior to placement of the final surface. The contractor must ensure that all pipe are free and clear of any debris so that a complete inspection is possible.</p> <p style="padding-left: 40px;">Notify the Engineer immediately if distresses or locations of improper installation are discovered. When camera testing shows distresses or improper installation in the installed pipe, the Engineer may require additional sections to be tested. Provide the video and report to the Engineer when testing is complete in accordance with KM 64-114.</p> <p style="padding-left: 40px;">Pipes that exhibit distress or signs of improper installation may necessitate repair or removal as the Engineer directs. These signs include, but are not limited to: deflection, cracking, joint separation, sagging or other interior damage. If corrugated metal or thermoplastic pipes exceed the deflection and installation thresholds indicated in the table below, provide the Department with an evaluation of each location conducted by a Professional Engineer addressing the severity of the deflection, structural integrity, environmental conditions, design service life, and an evaluation of the factor of safety using Section 12, "Buried Structures and Tunnel Liners," of the AASHTO LRFD Bridge Design Specifications. Based on the evaluation, the Department may allow the pipe to remain in place at a reduced unit price as shown in the table below. Provide 5 business days for the Department to review the evaluation. When the pipe shows deflection of 10 percent or greater, remove and replace the pipe. When the camera/video or laser inspection results are called into question, the Department may require direct measurements or mandrel testing.</p> <p style="padding-left: 40px;">The Cabinet may elect to conduct Quality Assurance verifications of any pipe inspections.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 24, 2009 Letting)

SUBSECTION: REVISION:	701.04.07 Testing. Replace and rename the subsection with the following: 701.04.07 Pipeline Video Inspection. The Department will measure the quantity in linear feet along the pipe invert of the structure inspected. When inspection above the specified 50 percent is performed due to a disagreement or suspicion of additional distresses and the Department is found in error, the Department will measure the quantity as Extra Work according to Subsection 104.03. However, if additional distresses or non-conformance is found, the Department will not measure the additional inspection for payment.												
SUBSECTION: REVISION:	701.05 PAYMENT. Add the following pay item to the list of pay items: <table border="0" style="width: 100%;"><tr><td style="text-align: left;"><u>Code</u> 23131ER701</td><td style="text-align: center;"><u>Pay Item</u> Pipeline Video Inspection</td><td style="text-align: right;"><u>Pay Unit</u> Linear Foot</td></tr></table>	<u>Code</u> 23131ER701	<u>Pay Item</u> Pipeline Video Inspection	<u>Pay Unit</u> Linear Foot									
<u>Code</u> 23131ER701	<u>Pay Item</u> Pipeline Video Inspection	<u>Pay Unit</u> Linear Foot											
SUBSECTION: TABLE: REVISION:	701.05 PAYMENT PIPE DEFLECTION DETERMINED BY CAMERA TESTING Replace this table with the following table and note: <table border="1" style="margin: 10px auto; width: 80%;"><thead><tr><th colspan="2" style="text-align: center;">PIPE DEFLECTION</th></tr><tr><th style="text-align: center;">Amount of Deflection (%)</th><th style="text-align: center;">Payment</th></tr></thead><tbody><tr><td style="text-align: center;">0.0 to 5.0</td><td style="text-align: center;">100% of the Unit Bid Price</td></tr><tr><td style="text-align: center;">5.1 to 9.9</td><td style="text-align: center;">50% of the Unit Bid Price ⁽¹⁾</td></tr><tr><td style="text-align: center;">10 or greater</td><td style="text-align: center;">Remove and Replace</td></tr></tbody></table> <p>⁽¹⁾ Provide Structural Analysis as indicated above. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price.</p>	PIPE DEFLECTION		Amount of Deflection (%)	Payment	0.0 to 5.0	100% of the Unit Bid Price	5.1 to 9.9	50% of the Unit Bid Price ⁽¹⁾	10 or greater	Remove and Replace		
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SUBSECTION: TABLE: REVISION:	701.05 PAYMENT PIPE DEFLECTION DETERMINED BY MANDREL TESTING Delete this table.												
SUBSECTION: REVISION:	713.02.01 Paint. Replace with the following: Conform to Section 842 and Section 846.												
SUBSECTION: REVISION:	713.03 CONSTRUCTION. Replace the first sentence of the second paragraph with the following: On interstates and parkways, and other routes approved by the State Highway Engineer, install pavement striping that is 6 inches in width.												
SUBSECTION: REVISION:	713.03.03 Paint Application. Replace the second paragraph with the following table: <table border="1" style="margin: 10px auto; width: 80%;"><thead><tr><th style="text-align: center;">Material</th><th style="text-align: center;">Paint Application Rate</th><th style="text-align: center;">Glass Beads Application Rate</th></tr></thead><tbody><tr><td>4 inch waterborne paint</td><td style="text-align: center;">Min. of 16.5 gallons/mile</td><td style="text-align: center;">Min. of 6 pounds/gallon</td></tr><tr><td>6 inch waterborne paint</td><td style="text-align: center;">Min. of 24.8 gallons/mile</td><td style="text-align: center;">Min. of 6 pounds/gallon</td></tr><tr><td>6 inch durable waterborne paint</td><td style="text-align: center;">Min. of 36 gallons/mile</td><td style="text-align: center;">Min. of 6 pounds/gallon</td></tr></tbody></table>	Material	Paint Application Rate	Glass Beads Application Rate	4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon	6 inch waterborne paint	Min. of 24.8 gallons/mile	Min. of 6 pounds/gallon	6 inch durable waterborne paint	Min. of 36 gallons/mile	Min. of 6 pounds/gallon
Material	Paint Application Rate	Glass Beads Application Rate											
4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon											
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**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 24, 2009 Letting)

SUBSECTION: REVISION:	713.03.04 Marking Removal. Replace the last sentence of the paragraph with the following: Vacuum all marking material and removal debris concurrently with the marking removal operation.									
SUBSECTION: REVISION:	713.05 PAYMENT. Insert the following codes and pay items below the Pavement Striping – Permanent Paint: <table border="0"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Item</u></th> <th><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>23159EN</td> <td>Durable Waterborne Marking – 6 IN W</td> <td>Linear Foot</td> </tr> <tr> <td>23160EN</td> <td>Durable Waterborne Marking – 6 IN Y</td> <td>Linear Foot</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	23159EN	Durable Waterborne Marking – 6 IN W	Linear Foot	23160EN	Durable Waterborne Marking – 6 IN Y	Linear Foot
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>								
23159EN	Durable Waterborne Marking – 6 IN W	Linear Foot								
23160EN	Durable Waterborne Marking – 6 IN Y	Linear Foot								
SUBSECTION: REVISION:	714.03 CONSTRUCTION. Insert the following paragraph at the end of the third paragraph: Use Type I Tape for markings on bridge decks, JPC pavement and JPC intersections. Thermoplastic should only be used for markings on asphalt pavement									
SUBSECTION: REVISION:	714.03.07 Marking Removal. Replace the third sentence of the paragraph with the following: Vacuum all marking material and removal debris concurrently with the marking removal operation.									
SUBSECTION: REVISION:	716.01 DESCRIPTION. Insert the following after the first sentence: Energize lighting as soon as it is fully functional and ready for inspection. Ensure that lighting remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.									
SUBSECTION: REVISION:	716.02.01 Roadway Lighting Materials. Replace the third sentence of the paragraph with the following: Submit for material approval an electronic file of descriptive literature, drawings, and any requested design data.									
SECTION: REVISION:	717 – THERMOPLASTIC INTERSECTION MARKINGS. Replace the section name with the following: INTERSECTION MARKINGS.									
SUBSECTION: REVISION:	717.01 DESCRIPTION: Replace the paragraph with the following: Furnish and install thermoplastic or Type I tape intersection markings (Stop Bars, Crosswalks, Turn Arrows, etc.) Thermoplastic markings may be installed by either a machine applied, screed extrusion process or by applying preformed thermoplastic intersection marking material.									
SUBSECTION: REVISION:	717.02 MATERIALS AND EQUIPMENT. Insert the following subsection: 717.02.06 Type I Tape. Conform to Section 836.									
SUBSECTION: REVISION:	717.03.03 Application. Insert the following part to the subsection: B) Type I Tape Intersection Markings. Apply according to the manufacturer's recommendations. Cut all tape at pavement joints when applied to concrete surfaces.									

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 24, 2009 Letting)

<p>SUBSECTION: PART: REVISION:</p>	<p>717.03.05 Proving Period. A) Requirements. Insert the following to this section:</p> <p>2) Type I Tape. During the proving period, ensure that the pavement marking material shows no signs of failure due to blistering, excessive cracking, bleeding, staining, discoloration, oil content of the pavement materials, drippings, chipping, spalling, poor adhesion to the pavement, loss of retroreflectivity, vehicular damage, and normal wear. Type I Tape is manufactured off site and warranted by the manufacturer to meet certain retroreflective requirements. As long as the material is adequately bonded to the surface and shows no signs of failure due to the other items listed in Subsection 714.03.06 A) 1), retroreflectivity readings will not be required. In the absence of readings, the Department will accept tape based on a nighttime visual observation.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>717.03.06 Marking Removal. Replace the third sentence of the paragraph with the following:</p> <p>Vacuum all marking material and removal debris concurrently with the marking removal operation.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>717.05 PAYMENT. Insert the following bid item codes:</p> <table border="0"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Unit</u></th> <th><u>Pay Item</u></th> </tr> </thead> <tbody> <tr> <td>06563</td> <td>Pave Marking – R/R X Bucks 16 IN</td> <td>Linear Foot</td> </tr> <tr> <td>20782NS714</td> <td>Pave Marking Thermo – Bike</td> <td>Each</td> </tr> <tr> <td>23251ES717, 23264ES717</td> <td>Pave Mark TY I Tape X-Walk, Size</td> <td>Linear Foot</td> </tr> <tr> <td>23252ES717, 23265ES717</td> <td>Pave Mark TY I Tape Stop Bar, Size</td> <td>Linear Foot</td> </tr> <tr> <td>23253ES717</td> <td>Pave Mark TY I Tape Cross Hatch</td> <td>Square Foot</td> </tr> <tr> <td>23254ES717</td> <td>Pave Mark TY I Tape Dotted Lane Extension</td> <td>Linear Foot</td> </tr> <tr> <td>23255ES717</td> <td>Pave Mark TY I Tape Arrow, Type</td> <td>Each</td> </tr> <tr> <td>23268ES717-23270ES717</td> <td></td> <td></td> </tr> <tr> <td>23256ES717</td> <td>Pave Mark TY I Tape- ONLY</td> <td>Each</td> </tr> <tr> <td>23257ES717</td> <td>Pave Mark TY I Tape- SCHOOL</td> <td>Each</td> </tr> <tr> <td>23266ES717</td> <td>Pave Mark TY 1 Tape R/R X Bucks-16 IN</td> <td>Linear Foot</td> </tr> <tr> <td>23267ES717</td> <td>Pave Mark TY 1 Tape-Bike</td> <td>Each</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Unit</u>	<u>Pay Item</u>	06563	Pave Marking – R/R X Bucks 16 IN	Linear Foot	20782NS714	Pave Marking Thermo – Bike	Each	23251ES717, 23264ES717	Pave Mark TY I Tape X-Walk, Size	Linear Foot	23252ES717, 23265ES717	Pave Mark TY I Tape Stop Bar, Size	Linear Foot	23253ES717	Pave Mark TY I Tape Cross Hatch	Square Foot	23254ES717	Pave Mark TY I Tape Dotted Lane Extension	Linear Foot	23255ES717	Pave Mark TY I Tape Arrow, Type	Each	23268ES717-23270ES717			23256ES717	Pave Mark TY I Tape- ONLY	Each	23257ES717	Pave Mark TY I Tape- SCHOOL	Each	23266ES717	Pave Mark TY 1 Tape R/R X Bucks-16 IN	Linear Foot	23267ES717	Pave Mark TY 1 Tape-Bike	Each
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<p>SUBSECTION: REVISION:</p>	<p>805.01 GENERAL. Replace the second paragraph with the following:</p> <p>The Department’s List of Approved Materials includes the Aggregate Source List, the list of Class A and Class B Polish-Resistant Aggregate Sources, and the Concrete Restriction List.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>805.04 CONCRETE. Replace the “AASHTO T 160” reference in first sentence of the third paragraph with “KM 64-629”</p>																																							
<p>SUBSECTION: TABLE: PART: REVISION:</p>	<p>805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE. AGGREGATE SIZE USE Cement Concrete Structures and Incidental Construction Replace “9-M for Waterproofing Overlays” with “8 or 9-M for Waterproofing Overlays”</p>																																							

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition (Effective with the July 24, 2009 Letting)

SUBSECTION: 805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE.
REVISION: Replace the "SIZES OF COARSE AGGREGATES" table in with the following:

Aggregate Size	Sieve	AMOUNTS FINER THAN EACH LABORATORY SIEVE (SQUARE OPENINGS) PERCENTAGE BY WEIGHT															
		4 inch	3 1/2 inch	3 inch	2 1/2 inch	2 inch	1 1/2 inch	1 inch	3/4 inch	1/2 inch	3/8 inch	No. 4	No. 8	No. 16	No. 30	No. 100	No. 200
1	Nominal ⁽³⁾ Maximum Aggregate Size 3 1/2 inch	100	90-100		25-60		0-15		0-5								
2	2 1/2 inch			100	90-100	35-70	0-15		0-5								
23	2 inch			100		40-90	0-15			0-5							
3	2 inch				100	90-100	35-70	0-15		0-5							
357	2 inch				100	95-100		35-70		10-30							
4	1 1/2 inch				100	100	90-100	20-55	0-15		0-5						
467	1 1/2 inch				100	100	95-100	35-70		10-30	0-5						
5	1 inch					100	90-100	20-55	0-10	0-5							
57	1 inch					100	95-100		25-60		0-10	0-5					
610	1 inch					100	85-100		40-75		15-40						
67	3/4 inch						100	90-100		20-55	0-10	0-5					
68	3/4 inch						100	90-100		30-65	5-25	0-10	0-5				
710	3/4 inch						100	80-100		30-75	0-30						
78	1/2 inch							100	90-100	40-75	5-25	0-10	0-5				
8	3/8 inch								100	85-100	10-30	0-10	0-5				
9-M	3/8 inch								100	75-100	0-25	0-5					
10 ⁽²⁾	No. 4									100	85-100			10-30			
11 ⁽²⁾	No. 4									100	40-90	10-40			0-5		
DENSE GRADED AGGREGATE ⁽¹⁾	3/4 inch						100	70-100		50-80	30-65			10-40		4-13	
CRUSHED STONE BASE ⁽¹⁾	1 1/2 inch				100			60-95		30-70	15-55			5-20		0-8	

⁽¹⁾ Gradation performed by wet sieve KM 64-620 or AASHTO T 11/T 27.

⁽²⁾ Sizes shown for convenience and are not to be considered as coarse aggregates.

⁽³⁾ Nominal Maximum Size is the largest sieve on the gradation table for an aggregate size on which any material may be retained.

Note: The Department will allow blending of same source/same type aggregate when precise procedures are used such as cold feed, belt, or equivalent and combining of sizes or types of aggregate using the weigh hopper at concrete plants or controlled feed belts at the pugmill to obtain designated sizes.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 24, 2009 Letting)

<p>SUBSECTION: REVISION:</p>	<p>805.16 SAMPLING AND TESTING. Replace the "AASHTO T 160" method with the "KM 64-629" method for the Concrete Beam Expansion Test. Replace the "ASTM D 3042" method with the "KM 64-625" method for Insoluble Residue.</p>						
<p>SUBSECTION: REVISION:</p>	<p>810.04.01 Coating Requirements. Replace the "Subsection 806.07" references with "Subsection 806.06"</p>						
<p>SUBSECTION: PART: REVISION:</p>	<p>810.06.01 Polyvinyl Chloride (PVC) Pipe. B) Culvert and Entrance Pipe. Replace the title with the following: B) Culvert Pipe, Storm Sewer, and Entrance Pipe.</p>						
<p>SUBSECTION: REVISION:</p>	<p>837.03 APPROVAL. Replace the last sentence with the following: The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material.</p>						
<p>SUBSECTION: REVISION:</p>	<p>837.03.01 Composition. COMPOSITION Table: Replace <table border="1"> <tr> <td>Lead Chromate</td> <td>0.0 max.</td> <td>4.0 min.</td> </tr> </table> with <table border="1"> <tr> <td>Heavy Metals Content</td> <td colspan="2">Comply with 40 CFR 261</td> </tr> </table> </p>	Lead Chromate	0.0 max.	4.0 min.	Heavy Metals Content	Comply with 40 CFR 261	
Lead Chromate	0.0 max.	4.0 min.					
Heavy Metals Content	Comply with 40 CFR 261						
<p>SECTION: REVISION:</p>	<p>DIVISION 800 MATERIAL DETAILS Add the following section in Division 800 SECTION 846 – DURABLE WATERBORNE PAINT 846.01 DESCRIPTION. This section covers quick-drying durable waterborne pavement striping paint for permanent applications. The paint shall be ready-mixed, one-component, 100% acrylic waterborne striping paint suitable for application on such traffic-bearing surfaces as Portland cement concrete, bituminous cement concrete, asphalt, tar, and previously painted areas of these surfaces. 846.02 Approval. Select materials that conform to the composition requirements below. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content. Submit initial samples for approval before beginning striping operations. The initial sample may be sent from the manufacture of the paint. The Department will randomly sample and evaluate the paint each week that the striping operations are in progress. The non-volatile portion of the vehicle shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis. The acrylic resin used shall be a 100% cross-linking acrylic as evidenced by infrared peaks at wavelengths 1568, 1624, and 1672 cm-1 with intensities equal to those produced by an acrylic resin known to be 100% cross-linking.</p>						

**Supplemental Specifications to The Standard Specifications
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PAINT COMPOSITION		
Property and Test Method	Yellow	White
Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45° illumination and 0° viewing with a 2° observer	L* 81.76 a* 19.79 b* 89.89 Maximum allowable variation 2.0ΔE*	L* 93.51 a* -1.01 b* 0.70 Maximum allowable variation 2.0ΔE*
Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45° illumination and 0° viewing with a 2° observer	L* 86.90 a* 24.80 b* 95.45 Maximum allowable variation 2.0ΔE*	L* 93.45 a* -0.79 b* 0.43 Maximum allowable variation 2.0ΔE*
Heavy Metals Content	Comply with 40 CFR 261	Comply with 40 CFR 261
Titanium Dioxide ASTM D 4764	NA	10% by weight of pigment min.
VOC ASTM D 2369 and D 4017	1.25 lb/gal max.	1.25 lb/gal max.
Contrast Ratio (at 15 mils wft)	0.97	0.99

846.02.01 Manufacturers Certification. Provide a certification of analysis for each lot of traffic paint produced stating conformance to the requirements of this section. Report the formulation identification, traffic paint trade name, color, date of manufacturer, total quantity of lot produced, actual quantity of traffic paint represented, sampling method utilized to obtain the samples, and data for each sample tested to represent each lot produced.

846.03 ACCEPTANCE PROCEDURES FOR NON-SPECIFICATION DURABLE WATERBORNE PAVEMENT STRIPING PAINT. When non-specification paint is inadvertently incorporated into the work the Department will accept the material with a reduction in pay. The percentage deduction is cumulative based on its compositional properties, but will not exceed 60 percent. The Department will calculate the payment reduction on the unit bid price for the routes where the non-specification paint was used.

DURABLE WATERBORNE PAVEMENT STRIPING PAINT REDUCTION SCHEDULE						
Non-conforming Property	Resin	Color	Contrast	TiO₂	VOC	Heavy Metals Content
Reduction Rate	60%	10%	10%	10%	60%	60%

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

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

	Page
I. General-----	1
II. Nondiscrimination-----	1
III. Nonsegregated Facilities-----	3
IV. Payment of Predetermined Minimum Wage-----	3
V. Statements and Payrolls-----	6
VI. Record of Materials, Supplies, and Labor-----	6
VII. Subletting or Assigning the Contract-----	7
VIII. Safety: Accident Prevention-----	7
IX. False Statements Concerning Highway Projects-----	7
X. Implementation of Clean Air Act and Federal Water Pollution Control Act-----	8
XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion-----	8
XII. Certification Regarding Use of Contract Funds for Lobbying-----	9

ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

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

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4, and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

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

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

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

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

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

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

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

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

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

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

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

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

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

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

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

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

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

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

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

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

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

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

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

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

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin,

age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

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

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

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

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

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics

shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

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

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

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

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

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

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

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

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

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable

classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

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

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

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

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wagedetermination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of

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

6. Withholding:

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

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any

liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

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

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

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

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

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

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

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

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

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

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

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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

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

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

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

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

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

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

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

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

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

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

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

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

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

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

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which

this proposal is submitted for assistance in obtaining a copy of those regulations.

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

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

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

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

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

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

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

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

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

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

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

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

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

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

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

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

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

* * * * *

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

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

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

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XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

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

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

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and

submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

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

**KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

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

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

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

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

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (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 administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

REVISED: 12-3-92

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.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

	HIGHWAY BASIC HOURLY RATES	FRINGE BENEFIT PAYMENTS COMBINED
<u>CRAFTS:</u>		
Breckinridge County:		
Bricklayers.....	26.97.....	11.78
Bullitt, Carroll, Grayson, Hardin, Henry, Jefferson, Larue, Marion, Meade, Nelson, Oldham, Shelby, Spencer and Trimble Counties:		
Bricklayers.....	24.11.....	9.97
Bracken, Gallatin, Grant, Mason and Robertson Counties:		
Bricklayers.....	26.11.....	9.49
Boyd, Carter, Elliott, Fleming, Greenup, Lewis and Rowan Counties:		
Bricklayers.....	25.80.....	14.88
Anderson, Bath, Bourbon, Boyle, Clark, Fayette, Franklin, Harrison, Jessamine, Madison, Mercer, Montgomery, Nicholas, Owen, Scott, Washington and Woodford Counties:		
Bricklayers (Layout Men)	24.36.....	9.97
Bricklayers.....	24.11.....	9.97
Refractory/Acid Brick/Glass.....	24.61.....	9.97
All Counties		
Carpenters:	24.84.....	10.23
Divers.....	37.64.....	10.23
Piledrivermen.....	25.09.....	10.23
Bracken and Grant Counties:		
Millwrights	21.90.....	7.92
Anderson, Bath, Bourbon, Boyle, Clark, Fayette, Franklin, Harrison, Jessamine, Madison, Mercer, Montgomery, Nicholas, Owen, Scott and Woodford Counties:		
Millwrights	22.95.....	13.50
Boyd, Carter, Elliott, Fleming, Greenup, Lewis, Mason, Robertson, and Rowan Counties:		
Millwrights	30.60.....	13.78
Breckinridge, Bullitt, Carroll, Gallatin, Grayson, Hardin, Henry, Jefferson, Larue, Marion, Meade, Nelson, Oldham, Shelby, Spencer, Trimble and Washington Counties:		
Millwrights	24.18.....	15.64
Bracken, Gallatin and Grant Counties:		
Electricians	26.11.....	13.32
Sound Communications:		
Technician	20.45.....	6.95

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

HIGHWAY BASIC HOURLY RATES	FRINGE BENEFIT PAYMENTS COMBINED
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CRAFTS: (continued)

Boyd, Carter, Elliott and Rowan Counties:

Electricians:

Cable Splicers	32.68.....	18.13
Electricians	31.12.....	18.08

Anderson, Bath, Bourbon, Boyle, Breckinridge, Bullitt, Carroll, Clark, Fayette, Franklin, Grayson, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Madison, Marion, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties:

Electricians	28.30.....	12.55
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Fleming, Greenup, Lewis and Mason Counties:

Electricians	30.55.....	11.87
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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, Pecksrige, 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) & Bracken, Gallatin, Grant, Harrison & Robertson Counties:

Ironworkers:

Fence Erector	23.55.....	16.72
Structural.....	26.17.....	16.72

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, Stamping Ground & Woodlake); Anderson, Boyle, Breckinridge, Bullitt, Fayette, Franklin, Grayson, Hardin, Henry, Jefferson,

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

HIGHWAY BASIC HOURLY RATES	FRINGE BENEFIT PAYMENTS COMBINED
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CRAFTS: (continued)

Jessamine, Larue, Madison, Marion, Meade, Mercer, Nelson, Oldham, Shelby, Spencer, Trimble, Washington & Woodford Counties:

Ironworkers.....	24.78.....	17.04
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Bourbon (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan); Carroll (Eastern third, including the Townships of Ghent); Fleming (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksrige, 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);

Bracken, Gallatin, Grant, Harrison & Robertson Counties:

Ironworkers:

Up to and including 30- mile radius of Hamilton County, Ohio Courthouse.....	26.20.....	16.70
Beyond 30- mile radius of Hamilton County, Ohio Courthouse	26.45.....	16.70

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, Pecksrige, 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); Bath, Boyd, Carter, Elliott, Greenup, Lewis, Montgomery & Rowan Counties:

Ironworkers:

Zone 1	28.38.....	17.37
Zone 2	28.78.....	17.37
Zone 3	30.38.....	17.37

- 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.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

HIGHWAY BASIC HOURLY RATES	FRINGE BENEFIT PAYMENTS COMBINED
<u>CRAFTS:</u> (continued)	
Anderson, Breckinridge, Bullitt, Carroll, Grayson, Hardin, Henry, Jefferson, Larue, Marion, Meade, Nelson, Oldham, Shelby, Spencer, Trimble and Washington Counties:	
Painters:	
Brush & Roller	18.50..... 9.84
Spray, Sand Blast, Power Tools, Water Blast & Steam Cleaning.....	19.50..... 9.84
Bracken, Gallatin, Grant, Mason, and Owen Counties:	
Painters:	
(Heavy and Highway Bridges- Guardrails-Lightpoles-Striping):	
Bridge/Equipment Tender and Containment Builder	20.49..... 6.83
Brush and Roller	23.10..... 6.83
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement.....	
	24.10..... 6.83
Sand Blasting & Water Blasting	23.85..... 6.83
Spray	23.60..... 6.83
Bath, Bourbon, Boyle, Clark, Fayette, Fleming, Franklin, Harrison, Jessamine, Madison, Mercer, Montgomery, Nicholas, Robertson, Scott and Woodford Counties	
Painters:	
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
Bridge/Equipment Tender and/or Containment Builder	
	18.90..... 5.90
Boyd, Carter, Elliott, Greenup, Lewis and Rowan Counties	
Painters:	
Bridges	27.83..... 10.00
All Other Work.....	24.83..... 10.00

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

HIGHWAY BASIC HOURLY RATES	FRINGE BENEFIT PAYMENTS COMBINED
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CRAFTS: (continued)

Breckinridge, Bullitt, Carroll (Western Half), Franklin (Western three-fourths), Grayson, Hardin, Henry, Jefferson, Larue, Marion, Meade, Nelson, Oldham, Shelby, Spencer, Trimble and Washington Counties:

Plumber 30.00 13.63

Boyd, Carter, Elliott, Greenup, Lewis and Rowan Counties:

Plumbers and Steamfitters 30.45 14.57

Bracken, Carroll (Eastern Half), Gallatin, Grant, Mason, Owen and Robertson Counties:

Pipefitters and Plumbers 28.39 14.30

LABORERS:

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, & Woodford Counties:

GROUP 1 - Aging and 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 and Hazardous Waste - Level D, Flagperson, Grade Checker, Hand Digging and Hand Back Filling, Highway Marker Placer, Landscaping Mesh Handler and Placer, Puddler, Railroad, Rip-Rap and Grouter, Right-of-Way Sign, Guard rail and Fence Installer, Signal Person, Sound Barrier Installer, Storm and Sanitary Sewer, Swamper, Truck Spotter and Dumper, and Wrecking of Concrete Forms, General Cleanup.

BASE RATE 19.86

FRINGE BENEFITS 9.55

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

BASE RATE 20.11

FRINGE BENEFITS 9.55

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

LABORERS: (continued)

GROUP 3 - Asphalt Luteman and Raker, Gunnite Nozzleman, Gunnite Operator and Mixer, Grout Pump Operator, Side Rail Setter, Rail Paved Ditch, Screw Operator, Tunnel (Free Air) and Water Blaster.

BASE RATE 20.16
FRINGE BENEFITS 9.55

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

BASE RATE 20.76
FRINGE BENEFITS 9.55

LABORERS:

Anderson, Bullitt, Carroll, Hardin, Henry, Jefferson, Larue, Marion, Meade, Nelson, Oldham, Shelby, Spencer, Trimble & Washington Counties:

GROUP 1 - Aging and 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 and Hazardous Waste - Level D, Flagperson, Grade Checker, Hand Digging and Hand Back Filling, Highway Marker Placer, Landscaping Mesh Handler and Placer, Puddler, Railroad, Rip-Rap and Grouter, Right-of-Way Sign, Guardrail and Fence Installer, Signal Person, Sound Barrier Installer, Storm and Sanitary Sewer, Swamper, Truck Spotter and Dumper, and Wrecking of Concrete Forms, General Cleanup.

BASE RATE 20.01
FRINGE BENEFITS 9.40

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

BASE RATE 20.26
FRINGE BENEFITS 9.40

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

LABORERS: (continued)

GROUP 3 - Asphalt Luteman and Raker, Gunnite Nozzleman, Gunnite Operator and Mixer, Grout Pump Operator, Side Rail Setter, Rail Paved Ditch, Screw Operator, Tunnel (Free Air) and Water Blaster.

BASE RATE20.31
FRINGE BENEFITS9.40

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

BASE RATE20.91
FRINGE BENEFITS9.40

LABORERS:

Breckinridge & Grayson Counties:

GROUP 1 - Aging and 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 and Hazardous Waste - Level D, Flagperson, Grade Checker, Hand Digging and Hand Back Filling, Highway Marker Placer, Landscaping Mesh Handler and Placer, Puddler, Railroad, Rip-Rap and Grouter, Right-of-Way Sign, Guard rail and Fence Installer, Signal Person, Sound Barrier Installer, Storm and Sanitary Sewer, Swamper, Truck Spotter and Dumper, and Wrecking of Concrete Forms, General Cleanup.

BASE RATE20.46
FRINGE BENEFITS8.95

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

BASE RATE20.71
FRINGE BENEFITS8.95

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

LABORERS: (continued)

GROUP 3 - Asphalt Lutean and Raker, Gunnite Nozzleman, Gunnite Operator and Mixer, Grout Pump Operator, Side Rail Setter, Rail Paved Ditch, Screw Operator, Tunnel (Free Air) and Water Blaster.

BASE RATE 20.76
FRINGE BENEFITS 8.95

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

BASE RATE 21.36
FRINGE BENEFITS 8.95

TRUCK DRIVER CLASSIFICATIONS: TEAMSTERS **BASE**
RATE

GROUP 1 - Mobile Batch Truck Tender 16.57

GROUP 2 - Greaser, Tire Changer and Mechanic Tender 16.68

GROUP 3 - Single Axle Dump, Flatbed, Semi-trailer or Pole Trailer when used to pull building materials and equipment, Tandem Axle Dump, Distributor, Mixer and Truck Mechanic 16.86

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 and Pavement Breaker 16.96

FRINGE BENEFITS 7.34

OPERATING ENGINEERS:

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, Clamshell, Concrete Mixer (21 Cu. Ft. or Over), Concrete Paver, Truck-Mounted Concrete Pump, Core Drill, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Operator, Dredge Engineer, Elevating Grader and 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,

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

OPERATING ENGINEERS: (continued)

Mechanically Operated Laser Screed, Mechanic Welder, Mucking Machine, Motor Scraper, Orangepeel Bucket, Piledriver, Power Blade, Pumpcrete, Push Dozer, Rock Spreader Attached to Equipment, Rotary Drill, Roller (Bituminous), Scarifier, Scoopmobile, Shovel, Side Boom, Subgrader, Tailboom, Telescoping Type Forklift, Tow or Push Boat, Tower Crane (French, German and other types), Tractor Shovel and Truck Crane, Tunnel Mining Machines, Including Moles, Shields or similar types of Tunnel Mining Equipment.

BASE RATE 24.60
FRINGE BENEFITS 12.65

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, Fireman & Hoist (one drum), Flexplane, Forklift (regardless of lift height), Form Grader, Joint Sealing Machine, Outboard Motor Boat, Power Sweeper (riding type), Roller (rock), Ross Carrier, Skid Mounted Or Trailer Mounted Concrete Pump, Skid Steer Machine with all attachments, Switchman or Brakeman, Throttle Valve Person, Tractair and Road Widening Trencher, Tractor (50 H.P. or over), Truck Crane Oiler, Tugger, Welding Machine, Well Points and Whirley Oiler.

BASE RATE 22.18
FRINGE BENEFITS 12.65

All off road material handling equipment, including Articulating Dump Trucks, Greaser on Grease facilities servicing heavy equipment.

BASE RATE 22.56
FRINGE BENEFITS 12.65

Bituminous Distributor, Burlap and 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.) and Vibrator.

BASE RATE 21.92
FRINGE BENEFITS 12.65

Cranes - with Booms 150 ft. and 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.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

Employees assigned to work below ground level are to be paid 10% above basic wage rate. This does not apply to open cut work.

WELDERS - Receive rate for craft in which welding is incidental.

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

These rates are listed pursuant to Kentucky Determination No. CR-09-III HWY dated July 1, 2009 and/or Federal Decision Number KY20080027 dated February 8, 2008 modification #0 dated February 8, 2008, modification #1 dated March 7, 2008, modification #2 dated April 4, 2008, modification #3 dated May 2, 2008, modification #4 dated June 6, 2008, modification #5 dated July 4, 2008, modification #6 dated August 1, 2008, modification #7 dated August 15, 2008, modification #8 dated September 5, 2008, modification #9 dated October 3, 2008, modification #10 dated December 5, 2008, modification #11 dated January 2, 2009, modification #12 dated February 6, 2009, modification #13 dated March 6, 2009, modification #14 dated April 3, 2009, modification #15 dated June 5, 2009, modification #16 dated July 3, 2009, modification #17 dated July 24, 2009, modification #18 dated August 7, 2009 and modification #19 dated September 4, 2009.

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.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

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

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.2%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

**Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609**

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Jefferson County.

PART IV
INSURANCE

INSURANCE

The Contractor shall carry the following insurance in addition to the insurance required by law:

1. Contractor's Public Liability Insurance not less than \$100,000.00 for damages arising out of bodily injuries to or death to one person. Not less than \$300,000.00 for damages arising out of bodily injuries to or death to two or more persons.
2. Contractor's Property Damages Liability Insurance. Not less than \$100,000.00 for all damages arising out of injury or destruction of property in any one accident. Not less than \$300,000.00 for all damages during the policy period.
3. Contractor's Protective Public Liability and Property Damage Insurance. The contractor shall furnish evidence with respect to operations performed for him by subcontractors that he carries in his own behalf for the above stipulated amounts.
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. 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.

PART V
BID ITEMS

CONTRACT ID: 091059
COUNTY: JEFFERSON
PROPOSAL: ARRA 264-1(164)

PAGE: 1
LETTING: 09/25/09
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
SECTION 0001 ROADWAY						
0010	00001	DGA BASE	3,000.000	TON		
0020	00078	CRUSHED AGGREGATE SIZE NO 2	25.000	TON		
0030	00100	ASPHALT SEAL AGGREGATE	178.000	TON		
0040	00291	EMULSIFIED ASPHALT RS-2	22.000	TON		
0050	00462	CULVERT PIPE-18 IN	135.000	LF		
0060	00464	CULVERT PIPE-24 IN	135.000	LF		
0070	00471	CULVERT PIPE-54 IN	24.000	LF		
0080	01000	PERFORATED PIPE-4 IN	1,000.000	LF		
0090	01010	NON-PERFORATED PIPE-4 IN	500.000	LF		
0100	01020	PERF PIPE HEADWALL TY 1-4 IN	3.000	EACH		
0110	01024	PERF PIPE HEADWALL TY 2-4 IN	5.000	EACH		
0120	01028	PERF PIPE HEADWALL TY 3-4 IN	5.000	EACH		
0130	01451	S & F BOX INLET-OUTLET-24 IN	2.000	EACH		
0140	01490	DROP BOX INLET TYPE 1	1.000	EACH		
0150	01568	DROP BOX INLET TYPE 13S	1.000	EACH		
0160	01608	CONC MED BARR BOX INLET TY 12B1	2.000	EACH		
0170	01650	JUNCTION BOX	3.000	EACH		
0180	01691	FLUME INLET TYPE 2	3.000	EACH		
0190	01740	CORED HOLE DRAINAGE BOX CON-4 IN	2.000	EACH		
0200	01756	MANHOLE TYPE A	1.000	EACH		
0210	01845	ISLAND INTEGRAL CURB	112.000	LF		

JEFFERSON COUNTY
ARRA 264-1(164)KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622CONTRACT ID: 091059
COUNTY: JEFFERSON
PROPOSAL: ARRA 264-1(164)PAGE: 2
LETTING: 09/25/09
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0220	01904	REMOVE CURB	300.000	LF		
0230	01953	CONC MEDIAN BARRIER TYPE 12B2	324.000	LF		
0240	01982	DELINEATOR FOR GUARDRAIL-WHITE	235.000	EACH		
0250	01983	DELINEATOR FOR GUARDRAIL-YELLOW	45.000	EACH		
0260	01984	DELINEATOR FOR BARRIER-WHITE	250.000	EACH		
0270	01985	DELINEATOR FOR BARRIER-YELLOW	619.000	EACH		
0280	02025	JPC PAVEMENT-11 IN/24	52,650.000	SQYD		
0290	02058	REMOVE PCC PAVEMENT	52,650.000	SQYD		
0300	02060	PCC PAVEMENT DIAMOND GRINDING	374,092.000	SQYD		
0310	02115	SAW-CLEAN-RESEAL TVERSE JOINT	322,524.000	LF		
0320	02116	SAW-CLEAN-RESEAL LONGIT JOINT	338,622.000	LF		
0330	02220	FLOWABLE FILL	50.000	CUYD		
0340	02223	GRANULAR EMBANKMENT	30.000	CUYD		
0350	02237	DITCHING	15,000.000	LF		
0360	02351	GUARDRAIL-STEEL W BEAM-S FACE	15,875.000	LF		
0370	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	6.000	EACH		
0380	02367	GUARDRAIL END TREATMENT TYPE 1	18.000	EACH		
0390	02369	GUARDRAIL END TREATMENT TYPE 2A	18.000	EACH		
0400	02373	GUARDRAIL END TREATMENT TYPE 3	1.000	EACH		
0410	02381	REMOVE GUARDRAIL	17,075.000	LF		
0420	02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	13.000	EACH		
0430	02391	GUARDRAIL END TREATMENT TYPE 4A	1.000	EACH		

CONTRACT ID: 091059
COUNTY: JEFFERSON
PROPOSAL: ARRA 264-1(164)

PAGE: 3
LETTING: 09/25/09
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0440	02483	CHANNEL LINING CLASS II	750.000	TON		
0450	02562	SIGNS	4,600.000	SQFT		
0460	02598	FABRIC-GEOTEXTILE TYPE III	1,350.000	SQYD		
0470	02599	FABRIC-GEOTEXTILE TYPE IV	1,000.000	SQYD		
0480	02650	MAINTAIN & CONTROL TRAFFIC	(1.00)	LS		
0490	02671	PORTABLE CHANGEABLE MESSAGE SIGN	8.000	EACH		
0500	02714	SHOULDERING	20,000.000	LF		
0510	02775	ARROW PANEL	6.000	EACH		
0520	05950	EROSION CONTROL BLANKET	9,000.000	SQYD		
0530	06412	STEEL POST MILE MARKERS	13.000	EACH		
0540	06417	FLEXIBLE DELINEATOR POST-W	720.000	EACH		
0550	06418	FLEXIBLE DELINEATOR POST-Y	422.000	EACH		
0560	06511	PAVE STRIPING-TEMP PAINT-6 IN	857,000.000	LF		
0570	06556	PAVE STRIPING-DUR TY 1-6 IN W	117,647.000	LF		
0580	06557	PAVE STRIPING-DUR TY 1-6 IN Y	63,540.000	LF		
0590	06560	PAVE STRIPING-DUR TY 1-12 IN W	22,407.000	LF		
0600	06592	PAVEMENT MARKER TYPE V-B W/R	3,756.000	EACH		
0610	06600	REMOVE PAVEMENT MARKER TYPE V	2,633.000	EACH		
0620	08100	CONCRETE-CLASS A	5.470	CUYD		
0630	08150	STEEL REINFORCEMENT	385.000	LB		
0640	08904	CRASH CUSHION TY VI CLASS C	2.000	EACH		
0650	20366NN	REPLACE GRATE	6.000	EACH		

CONTRACT ID: 091059
COUNTY: JEFFERSON
PROPOSAL: ARRA 264-1(164)

PAGE: 4
LETTING: 09/25/09
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0660	20833ND	REPLACE MANHOLE	2.000	EACH		
0670	21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS	4,000.000	LF		
0680	21415ND	EROSION CONTROL	(1.00)	LS		
0690	21481ED	POLYMER PAVEMENT REPAIR	2,000.000	CUFT		
0700	21553EN	EMBANKMENT	1,000.000	CUYD		
0710	23237EN10W	WATERBLAST STRIPE REMOVAL	290,215.000	LF		
0720	23627EC	REMOVE AND REPLACE FENCE POST	5.000	EACH		
0730	23628EC	CORED HOLE DRAINAGE CONN TO HEADWALL	1.000	EACH		
0740	23629EC	REPAIR HEADWALL	1.000	EACH		
SECTION 0002 BRIDGE						
0750	03294	EXPAN JOINT REPLACE 1 1/2 IN	450.000	LF		
0760	03295	EXPAN JOINT REPLACE 2 IN	1,950.000	LF		
0770	03296	EXPAN JOINT REPLACE 2 1/2 IN	700.000	LF		
0780	03306	JACK & SUPPORT BRIDGE SPAN	1.000	EACH		
0790	22146EN	CONCRETE PATCHING REPAIR	170.000	SQFT		
0800	23630EC	ARMORED EDGE FOR CONCRETE	(1.00)	LS		
0810	23631EC	RESET BEARING PAD	1.000	EACH		
SECTION 0003 SIGNING						
0820	06407	SBM ALUM SHEET SIGNS .125 IN	75.000	SQFT		
0830	06408	SBM GALV STEEL PANEL SIGNS	105.000	SQFT		
0840	06410	STEEL POST TYPE 1	56.000	LF		

CONTRACT ID: 091059
COUNTY: JEFFERSON
PROPOSAL: ARRA 264-1(164)

PAGE: 5
LETTING: 09/25/09
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0850	06451	REMOVE SIGN SUPPORT BEAM	4.000	EACH		
0860	06490	CLASS A CONCRETE FOR SIGNS	0.920	CUYD		
0870	21596ND	GMSS TYPE D	4.000	EACH		
SECTION 0004 LIGHTING						
0880	04795	CONDUIT-2 IN	550.000	LF		
0890	04810	JUNCTION BOX-ELECTRICAL	1.000	EACH		
0900	04833	WIRE-NO. 8	1,100.000	LF		
SECTION 0005 TRAFFIC LOOPS						
0910	04795	CONDUIT-2 IN	330.000	LF		
0920	04820	TRENCHING AND BACKFILLING	270.000	LF		
0930	04829	PIEZOELECTRIC SENSOR	76.000	EACH		
0940	04830	LOOP WIRE	16,258.000	LF		
0950	04895	LOOP SAW SLOT AND FILL	2,996.000	LF		
0960	20359NN	GALVANIZED STEEL CABINET 20 IN X 20 IN	6.000	EACH		
0970	20360ES818	WOOD POST 4 IN X 4 IN	6.000	EACH		
0980	20391NS835	JUNCTION BOX TYPE A	12.000	EACH		
SECTION 0006 MOB AND DEMOB						
0990	02568	MOBILIZATION (NO MORE THAN 5%)		LUMP		
1000	02569	DEMOBILIZATION (AT LEAST 1.5%)		LUMP		
		TOTAL BID				