CALL NO. 317

CONTRACT ID. 172200

LIVINGSTON COUNTY

FED/STATE PROJECT NUMBER FD05 070 0060 001-005

DESCRIPTION ADAIR STREET (US 60)

WORK TYPE ASPHALT RESURFACING

PRIMARY COMPLETION DATE 11/15/2017

LETTING DATE: May 26,2017

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME May 26,2017. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 01

CONTRACT ID - 172200

FD05 070 0060 001-005

COUNTY - LIVINGSTON

PCN - MP07000601701
FD05 070 0060 001-005

ADAIR STREET (US 60) (MP 1.090) BEGIN AT KY 6074/LAKEVIEW ROAD EXTENDING EAST TO FERREN ROAD/ GILLAHAN ROAD (MP 4.392), A DISTANCE OF 03.30 MILES.ASPHALT RESURFACING

GEOGRAPHIC COORDINATES LATITUDE 37:02:54.08 LONGITUDE 88:29:08.02

COMPLETION DATE(S):

COMPLETED BY 11/15/2017 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/construction-procurement)

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2016 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

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

06/01/16

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

Reciprocal preference to be given by public agencies to resident bidders

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

SURFACING AREAS

The Department estimates the mainline surfacing width to be 22 feet.

The Department estimates the total mainline area to be surfaced to be 49,012 square yards.

The Department estimates the shoulder width to be 1 foot on each side.

The Department estimates the total shoulder area to be surfaced to be 3,874 square yards.

ASPHALT MIXTURE

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

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

FUEL AND ASPHALT PAY ADJUSTMENT

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

OPTION A

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

SPECIAL NOTE FOR ASPHALT CHIP SEAL

1. DESCRIPTION. Construct an asphalt chip seal consisting of one or more applications each of asphalt material and cover aggregate.

2. MATERIAL AND EQUIPMENT.

Asphalt Material. Furnish undiluted CRS-2P polymer modified emulsion that meets requirements **Section 806.05**

Aggregate. Provide an aggregate according to Section 403.03.03. It shall be a damp, washed, number 8 or 9M aggregate, free from dust or deleterious materials conforming to Section 805.05.

Equipment. Provide, and keep on the project at all times, an accurate thermometer, hand brooms, and other small tools and equipment essential for completion of the work.

The asphalt distributor for the application of the emulsion shall have full circulation spray bar that is adjustable to at least 16 feet wide in 2 feet increments and capable of heating and circulating the emulsion simultaneously, conforming to subsection 406.02.05. It must have computerized rate control for adjusting and controlling the application from the cab within 0.01 gallons per square yard increments. The distributor shall also be equipped with a volume measuring device and a thermometer for measuring the emulsion temperature in the tank.

The aggregate spreader shall be a continuous mechanical feed, self-propelled aggregate spreader with front discharge. Ensure the spreader can evenly distribute the aggregate from the transporting vehicle directly onto the fresh asphalt material in smooth, uniform layers, independent of the forward speed. Ensure that the spreader is capable of being filled and moved without discharging aggregate.

The roller shall be a Pneumatic tire roller weighing at least 5 tons.

The power broom shall be a mechanically powered kick-broom or vacuum type broom.

3. CONSTRUCTION.

Weather Limitations. Application of chip seal shall only be constructed when ambient temperature is 50 degrees F and rising. CRS-2P should not be applied when the air temperature is below 60°F and falling. Do not construct when the ambient temperature within the preceding 24 hours has been 35 degrees F or lower, except with the Engineer's written permission. Do not proceed with construction if rain is expected in a minimum period of 24 hours, nor when rain is

impending within 2 hours after completion of the chip seal. If an unexpected shower arises during operations, the asphalt distributor should be shut off immediately and placement of aggregate continued until all asphalt has been covered.

Preparation of Mixture. Submit a complete mix design to the Division of Construction and to the Division of Materials, Asphalt Branch and Aggregate Section, a minimum of 14 days prior to construction. Mix design shall be prepared by an approved laboratory, to verify the compatibility of the aggregate, asphalt emulsion and other additives. Perform the mix design with the same materials that will be used on the project.

Surface Preparation. Prior to operation, the contractor shall remove all existing thermoplastic striping, thermoplastic legends, and raised markers within application limits. All surfaces intended for application shall be thoroughly cleaned of all vegetation, loose material, dirt, or other objectionable material immediately before application of emulsion using a mechanical sweeper and wire hand brooms, when necessary. Clean the edges of the surface providing a full and uniformly clean width of roadway. Where mud or earth exists, remove it in advance and allow surface to thoroughly dry before applying emulsion. Mowing or removal of shoulder vegetation and or brush may be necessary for proper application.

If cracks cannot be adequately filled by emulsion, fill with proper asphalt material or hot pour joint sealer conforming to subsection 807.03.01. If applicable, apply cover aggregate before applying chip seal application.

Application Rates of Materials.

Properties	Minimum	Maximum
Application rate of emulsion, gallons/sq yard*	0.22	0.35
Emulsion temperature, F	110	185
Application rate of aggregate, lb/sy*	16	22

*****Engineer may adjust application rates due to existing conditions

4. APPLICATION.

Application of Emulsion. Heat and maintain emulsion between 110 and 185 degrees F during application. Polymer modified emulsion shall be applied when air temperature is at least 50 degrees F and rising and a minimum surface temperature of 70 degrees F.

Emulsion shall be applied using a pressure distributor in a uniform, continuous quantity at specified rates.

Keep the nozzles of the spray bar clean at all times. Immediately make any streaked areas uniform by use of a hand hose equipped with a nozzle.

Do not apply the asphalt material farther in advance of the spreading of the aggregate than can be covered directly by the aggregate immediately available at the site of work.

When the chip seal treatment is constructed in half-widths, provide complete coverage by overlapping the 2 applications approximately 4 inches along centerline.

Prevent spotting or discoloring curbs, headwalls, and other structures. When such discolorations occur, remove them at no expense to KYTC.

Make joints utilizing an approved method.

Aggregate. Aggregate cover material shall be cleaned and washed to remove dirt and dust, ensuring appropriate adhesion with emulsion. Due to this process, aggregate may be damp during application. Prior to breaking of the emulsion, aggregate shall be continuously and evenly spread with the proper equipment at the specified rates. Spreading equipment shall not contact the asphalt material before it is covered with aggregate. Precautions should be taken not to exceed the designated rate by more than 5 percent. Use hand brooms to correct any irregularities.

Rolling. A self-propelled pneumatic tire roller shall be used for the required rolling of the aggregate. This shall be done immediately following the spreading of aggregate. Operate the rollers parallel to the centerline in a manner preventing the dislodgment of newly applied aggregate. Rolling should proceed from the outer edge to the center, with each pass overlapping the previous by one-half. Cover the entire surface with at least 3 passes or more when the engineer directs.

Sweeping. Power sweep/vacuum the completed application to remove all excess aggregate after the asphalt material has cured sufficiently. Sweeping/vacuuming must be completed prior to any striping and/or before the end of the application day. Little to no aggregate shall be remaining on entrance/exit aprons of intersecting crossroads and driveways. A second sweeping may be required following the initial application day. Prior to a applying a fog seal or other of surface treatment over the chip seal, it may be opened to traffic for an amount of time specified in the contract. This may be necessary to ensure maximum aggregate retention.

5. MEASUREMENT.

When an authorized adjustment is made, KYTC will measure quantities up to 5 percent in excess of the designated application rate for payment. KYTC will not measure quantities exceeding the designated application rate by more than 5 percent for payment.

Asphalt Material. KYTC will measure the quantity in tons according to **Section 109.**

Aggregate. KYTC will measure the quantity in tons according to **Section 109.**

6. PAYMENT.

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

Pay Item	Pay Unit
Polymer Modified Emulsified Asphalt	Ton
Crushed Aggregate	Ton

KYTC will consider payment as full compensation for all work required under this section.

SPECIAL NOTE FOR ASPHALT SCRUB SEAL

1. DESCRIPTION. This work consists of placing a polymer modified asphalt emulsion which is scrubbed with a broom to fill and seal cracks and covered with a layer of aggregate.

2. MATERIAL AND EQUIPMENT.

Asphalt Material. Furnish undiluted CMS-1P or CMS-1PC polymer modified emulsion that meets requirements below:

EMULSIFIED ASPHALT SPECIFICATION			
PROPERTY	**METHOD**	**SPECIFICATION**	
		CMS-1P	**CMS-1PC**
Test on Emulsion			
Viscosity @ 122 ˚F (SFS)	AASHTO T 59	50 - 350	50-350
Residue, w%, minimum. (1)	AASHTO T 59	67	60
pH	ASTM E 70	2.0-5.0	2.0-5.0
Sieve, w%, max.	AASHTO T 59	0.1	0.1
Oil distillate, w%, max.	AASHTO T 59	0.5	0.5
TEST ON RESIDUE			
Viscosity @ 140 °F, P, maximum.	AASHTO T 201	3000	-
Penetration @ 39.2 °F, minimum.	AASHTO T 49	40	30
Elastic Recovery on residue by distillation, %, minimum (2)	AASHTO T 301	50	50
Test on Polymer:			
Tensile strength, die C dumbbell, psi, minimum	ASTM D 412 (3)	500	800
Swelling in rejuvenating agent, % maximum; 48 hours exposure @ 104 °F	ASTM D 471 (4) Modified	40% intact film	40%
Latex Density @ 73 °F	ASTM D 6937 (5,6)	-	1.00-1.05
TEST ON REJUVENATING AGENT:			
Flash point, COC, °F	AASHTO T 48	380 Min	
Viscosity, 140 °F, CST	AASHTO T 201	50-175	
Saturate, % by wt.	ASTM D 2007	30 Max	
Asphaltenes	ASTM D 2007	1.0 Max.	
Test on Residue from RTFO	AASHTO T 240		
Weight Change, %		6.5 Max.	
Viscosity Ratio		3 Max	

(1) Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350 ± 10 ˚F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 ± 5 min from first application of heat.

(2) Elastic Recovery @ 10 ˚C (50 ˚F): Hour glass sides, pull 20 cm, hold 5 minutes then cut, let sit 1 hour.

(3) Tensile Strength Determination: Samples for testing for tensile strength in accordance with ASTM D412 shall be tested with the following test procedure modifications:

(4) Prepare the polymer film, dilute the waterborne polymer to 40% Total Solids Content and pour 57 g into a Teflon or silicone release mold of dimensions 7" X 7" X ¼". Allow to dry at 23°C (73 °F) and 50% RH (controlled conditions) for 7 – 10 days total time, during which time the film should be flipped around once, preferably after 3 or 4 days. The film should be transparent in the end. To drive out any residual water, place the film in an oven at 50 °C for 30 min. Dried film thickness should be 25 ± 5 mils. Discard films <20 mil. Cut out dumbbell-shaped test specimens of dimension 75 mm total length, 25 mm mid-section (L) and 4 mm width of mid-section. Grip in Instron machine with gap size 1 inch, use 8 in/min cross-head speed.

(5) Polymer testing shall be prepared from polymer as follows: Resistance to Swelling: Using a syringe, place 0.8 g of latex into an 18 mm diameter DSR mold. Allow the sample to dry at ambient lab conditions (air conditioned) on the bench for 72 hours. Sample should be easily removable from the mold. Take the "button" out of the mold and place the sample into a forced air oven at 40 °C (104 °F) for 48 h (on release paper). If at the end of the ambient dry, the sample sticks to the mold, place it into the oven and check it after 1-2 h. After 48 h, cool and weigh the sample to the nearest 0.0001 g and record the weight. Put ½ in of Rejuvenating Agent into a 3 oz penetration tin. Place the "button" on the rejuvenating agent, and add another ½ in of rejuvenating agent, so that the "button" is covered. Put the cap on the penetration tin and place it into the 40 °C oven for 48 h. Remove the "button from the Rejuvenating Agent, blot surface of the "button" to remove excess Rejuvenating Agent, cool the "button" to room temperature and weigh it. Calculate weight gain of the "button", express as a percent.

(6) Replace "Emulsified Asphalt" with "Latex" in text of test method. The testing temperature used should be 25 ± 3 ˚C. The calculation in Section 7 should be as follows:

$$D = (W_f - W_t) * 0.1$$
$$S.G. = D / 8.337$$

Where: W_f = Weight of filled cup (g)
W_t = Weight of empty cup (g)

The Department will require a sample of the polymerized emulsion to be taken from the distributor spray bar at a lot frequency of one sample per 5,000 gallons of emulsion. Take two 1 gallon samples of the heated material and forward the sample to the Division of Materials for testing. Ensure the product temperature is between 160° and 180° F at the time of sampling.

Aggregate. Provide an aggregate according to Section 403.03.03. It shall be a damp, washed, number 8 or 9M aggregate, free from dust or deleterious materials conforming to Section 805.05.

Equipment. Provide, and keep on the project at all times, an accurate thermometer, hand brooms, and other small tools and equipment essential for completion of the work.

The asphalt distributor for the application of the emulsion shall have full circulation spray bar that is adjustable to at least 16 feet wide in 2 feet increments and capable of heating and circulating the emulsion simultaneously, conforming to subsection 406.02.05. It must have computerized rate control for adjusting and controlling the application from the cab within 0.01 gallons per square yard increments. The distributor shall also be equipped with a volume measuring device and a thermometer for measuring the emulsion temperature in the tank.

The scrub broom shall be rigid in frame construction and attached to and pulled by the distributor. It shall be light enough so not to squeegee the emulsion off the roadway surface. The leading and trailing broom heads angled at 10 to 15 degrees off the centerline of the supporting member with stiff bristles at minimum height of 5 inches.

The aggregate spreader shall be a continuous mechanical feed, self-propelled aggregate spreader with front discharge. Ensure the spreader can evenly distribute the aggregate from the transporting vehicle directly onto the fresh asphalt material in smooth, uniform layers, independent of the forward speed. Ensure that the spreader is capable of being filled and moved without discharging aggregate.

The roller shall be a Pneumatic tire roller weighing at least 5 tons.

The power broom shall be a mechanically powered kick-broom or vacuum type broom.

3. CONSTRUCTION.

Weather Limitations. Application of chip seal shall be applied when air temperature is at least 50 degrees F and rising and a minimum surface temperature of 70 degrees F. Do not construct when the ambient temperature within the preceding 24 hours has been 35 degrees F or lower. Do not proceed with construction if rain is expected in a minimum period of 24 hours. If an unexpected shower arises during operations, the asphalt distributor should be shut off immediately and placement of aggregate continued until all asphalt has been covered

Preparation of Mixture. Submit a complete mix design to the Division of Construction and to the Division of Materials, Asphalt Branch and Aggregate Section, a minimum of 14 days prior to construction. Mix design shall be prepared by an approved laboratory, to verify the compatibility of the aggregate, asphalt emulsion and other additives. Perform the mix design with the same materials that will be used on the project.

Surface Preparation. Prior to operation, the contractor shall remove all existing thermoplastic striping, thermoplastic legends, and raised markers within application limits. All surfaces intended for application shall be thoroughly cleaned of all vegetation, loose material, dirt, or other objectionable material immediately before application of emulsion using a mechanical sweeper and wire hand brooms, when necessary. Clean the edges of the surface providing a full and uniformly clean width of roadway. Where mud or earth exists, remove it in advance and allow surface to thoroughly dry before applying emulsion. Mowing or removal of shoulder vegetation and or brush may be necessary for proper application.

If cracks cannot be adequately filled by emulsion, fill with proper asphalt material or hot pour joint sealer conforming to subsection 807.03.01. If applicable, apply cover aggregate before applying scrub seal application.

Application Rates of Materials.

Properties	Minimum	Maximum
Application rate of emulsion, gallons/sq yard*	0.22	0.35
Emulsion temperature, F	110	185
Application rate of aggregate, lb/sy*	16	22

*****Engineer may adjust application rates due to existing conditions

4. APPLICATION.

Application of Emulsion. Heat and maintain emulsion between 110 and 185 degrees F during application. Polymer modified emulsion shall be applied when air temperature is at least 50 degrees F and rising and a minimum surface temperature of 70 degrees F.

Emulsion shall be applied using a pressure distributor in a uniform, continuous quantity at specified rates. Proper brooming equipment shall follow ensuring all cracks and voids are filled.

Keep the nozzles of the spray bar clean at all times. Immediately make any streaked areas uniform by use of a hand hose equipped with a nozzle.

Do not apply the asphalt material farther in advance of the spreading of the aggregate than can be covered directly by the aggregate immediately available at the site of work.

When the scrub seal treatment is constructed in half-widths, provide complete coverage by overlapping the 2 applications approximately 4 inches along centerline.

Prevent spotting or discoloring curbs, headwalls, and other structures. When such discolorations occur, remove them at no expense to KYTC.

Make joints utilizing an approved method.

Aggregate. Aggregate cover material shall be cleaned and washed to remove dirt and dust, ensuring appropriate adhesion with emulsion. Due to this process, aggregate may be damp during application. Immediately following scrubbing and prior to breaking of the emulsion, aggregate shall be continuously and evenly spread with the proper equipment at the specified rates. Spreading equipment shall not contact the asphalt material before it is covered with aggregate. Precautions should be taken not to exceed the designated rate by more than 5 percent. Use hand brooms to correct any irregularities.

Rolling. A self-propelled pneumatic tire roller shall be used for the required rolling of the aggregate. This shall be done immediately following the spreading of aggregate. Operate the rollers parallel to the centerline in a manner preventing the dislodgment of newly applied aggregate. Rolling should proceed from the outer edge to the center, with each pass overlapping the previous by one-half. Cover the entire surface with at least 3 passes or more when the engineer directs.

Sweeping. Power sweep/vacuum the completed application to remove all excess aggregate after the asphalt material has cured sufficiently. Sweeping/vacuuming must be completed prior to any striping and/or before the end of the application day. Little to no aggregate shall be remaining on entrance/exit aprons of intersecting crossroads and driveways. A second sweeping may be required following the initial application day. Prior to a applying a fog seal or other of surface treatment over the scrub seal, it may be opened to traffic for an amount of time specified in the contract. This may be necessary to ensure maximum aggregate retention.

5. MEASUREMENT.

When an authorized adjustment is made, KYTC will measure quantities up to 5 percent in excess of the designated application rate for payment. KYTC will not measure quantities exceeding the designated application rate by more than 5 percent for payment.

Asphalt Material. KYTC will measure the quantity in tons according to **Section 109.**

Aggregate. KYTC will measure the quantity in tons according to **Section 109.**

6. PAYMENT.

KYTC will make payment for the completed and accepted quantities of emulsified asphalt according to the following:

Emulsified Asphalt Price Adjustment Schedule

Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
CMS-1P						
Viscosity, 122 º F (SFS) AASHTO T 59	 50 - 350	 48 - 355	47 356	46 357	45 358	≤44 ≥ 359
pH, ASTM E 70	 2.0 – 5.0	 1.9 - 5.1	1.8 5.2	1.7 5.3	1.6 5.4	≤ 1.5 ≥ 5.5
Residue Penetration @ 4 ˚C, AASHTO T 49	≥ 40	≥ 39	38	37	36	≤ 35
Particle Charge, AASHTO T 59	Positive					
Oil Distillate, %, AASHTO T 59	≤ 0.5	≤ 0.6	0.65	0.7	0.75	≥ 0.8
Residue, % AASHTO T 59	≥ 67.0	≥ 66.0	65.5	65	64.5	≤ 64.4
Sieve, % AASHTO T 59	≤ 0.1	≤ 0.2	0.3	0.4	0.5	≥ 0.51
Residue Elastic Recovery @ 50 º F (cm) AASHTO T 301	≥ 50.0	≥ 48.0	47	46	45	≤ 44.9
Residue Viscosity @ 140 ˚ F, P	≤ 3000	≤ 3020	3021-3040	3041-3060	3061-3070	≥ 3071
CMS-1PC						
Viscosity, 122 º F (SFS) AASHTO T 59	 50 - 350	 48 - 355	47 356	46 357	45 358	≤44 ≥359
pH, ASTM E 70	 2.0 – 5.0	 1.9 - 5.1	1.8 5.2	1.7 5.3	1.6 5.4	≤ 1.5 ≥ 5.5
Residue Penetration @ 4 ˚C, AASHTO T 49	≥ 30	≥ 29	28	27	26	≤ 25
Particle Charge, AASHTO T 59	Positive					
Oil Distillate, %, AASHTO T 59	≤ 0.5	≤ 0.6	0.65	0.7	0.75	≥0.8
Residue, % AASHTO T 59	≥ 60.0	≥ 59.0	58.5	58	57.5	≤ 57.4
Sieve, % AASHTO T 59	≤ 0.1	≤ 0.2	0.3	0.4	0.5	≥ 0.51
Residue Elastic Recovery @ 50 ˚F (cm) AASHTO T 301	≥ 50.0	≥ 48.0	47	46	45	≤ 44.9

Code	Pay Item	Pay Unit
24858EC	Polymer Asphalt Emulsion for Scrub Seal	Ton
24883EC	Scrub Seal Aggregate	Ton

KYTC will consider payment as full compensation for all work required under this section.

January 26, 2017

SPECIAL NOTE FOR FIBER REINFORCEMENT OF ASPHALT

PART 1 – GENERAL

1.1 DESCRIPTION

This Section includes specifications for furnishing all materials, equipment, labor, and incidentals for mixing aramid fiber reinforcements to hot mix asphalt.

1.2 DEFINITIONS

A. HMA - hot mix asphalt, without aramid fiber.
B. WMA- warm mix asphalt, without aramid fiber.
C. Reinforced HMA - hot mix asphalt including aramid fibers properly proportioned, uniformly mixed and coated with asphalt.
D. Aramid fiber - pure aramid fiber meeting the material properties of this specification, without additive materials.
E. Delivery material(s) - the material(s) combined with the pure aramid fiber to facilitate Aramid fiber and HMA/WMA proportioning, uniform mixing with the HMA/WMA, and asphalt coating of the aramid fibers.
F. Aramid product - the aramid supplier's mixture of pure aramid fiber and delivery material(s).
G. Manufacturer - the company that produces the aramid fiber from raw materials.
H. Supplier - the company that offers an aramid product.

PART 2 – PRODUCT

2.1 MATERIALS

Meet the following aramid fiber properties.

Property	Measure	Standard
Material	Aramid	ASTM D276
Form	Monofilament fibers	Manufacturer Certification
Length	0.75 inches (+/- 10%)	Manufacturer Cert.
Specific Gravity	1.44	ASTM D276
Minimum Tensile Strength	400,000 psi	ASTM D3379
Maximum Tensile Elongation	1.8 %	ASTM D3379
Degradation Temperature	800 degrees F	ASTM D276
Acid and Alkali Resistance	Inert	Manufacturer Cert.

2.2 SUBMITTALS

Submit the following.

A. Identify the mixing plant.
B. Provide a specification sheet from the aramid fiber manufacturer.
C. Provide the following from the aramid product supplier at least three weeks prior

to HMA/WMA production.

1. The supplier's specified mix rate for the aramid product.
2. Certification that the amount of aramid fiber in the aramid product will be between 2.1 and 4.0 ounces of pure aramid fiber for each ton of hot mix asphalt.
3. Evidence showing how many times, if any, the supplier's fiber product has been successfully produced at the asphalt plant to be used for the project.
4. Proven method of introducing the aramid fibers into the hot mix asphalt which will not cause the aramid fibers to become airborne.

2.3 JOB MIX FORMULA

When aramid fiber is required as a mixture ingredient, modification to the job mix formula is not required.

PART 3 – EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

Store aramid product in a dry environment and do not allow them to be in contact with moisture.

Mix 3.0 ounces (+/1 1.0 ounces) of aramid fibers per ton of asphalt. The weight applied is for pure aramid fibers only, weight of any delivery materials is not considered.

Have a fiber supplier's representative on site during the first day of production mixing. This requirement can be waived if fiber supplier and HMA/WMA producer can supply evidence of supplier's brand of fiber product being successfully produced by the HMA/WMA producer. The fiber supplier's representative may be on site for additional days as requested by the Engineer.

Introduce the aramid product as follows:

1. Batch Plant

   When a batch type plant is used, add the aramid product dosage to the aggregate in the weigh hopper. This may be done with loose fibers and a fiber metering device, or may be done by using manual dosing equipment. If necessary, increase the batch dry mixing time to ensure the aramid fibers are uniformly distributed prior to the injection of asphalt cement into the mixer.

2. Drum Plant

   When a continuous or drier-drum type plant is used, add the aramid product to the RAP material to uniformly disperse with the aggregate and injected asphalt. Use a separate aramid product metering device feed system to proportion by weight of total mix,

the required percentage of fiber reinforcement into the mixture. Control the aramid product metering system with a proportioning device to meet the dosing requirements.

When a continuous or drier-drum type plant is used for limited production volumes, the addition of the aramid product may be done by using manual measuring tools or equipment and adding them directly onto the RAP belt or into the RAP opening on the plant. Because this is not an automated process, a written protocol must be supplied by the producer to demonstrate how they will attain the dosage requirement, and documentation must be supplied by the material manufacturer assuring this method will produce the desired uniform aramid fiber distribution.

Mix the aramid fiber with the aggregate longer, if needed, to allow thorough distribution of aramid fibers at the end of the mixing process and to promote asphalt coating of individual strands of aramid fiber. At the start of any fiber mixing, visually observe the reinforced HMA/WMA at the plant and in first three trucks at the point of discharge and prior to delivery to the job site. Observation shall include using a shovel or other device. Look for proper distribution of aramid fibers and make mixing adjustments if needed.

WMA: Use of a feeder system will be required for both Drum and Batch plants when producing Warm Mix Asphalt to ensure correct distribution and coating of the aramid fibers. This requirement maybe waved if the asphalt producer can demonstrate complete melting of the delivery material and proper incorporation of the aramid fibers into the WMA.

3.2 ACCEPTANCE

Acceptance of the reinforced HMA/WMA will include the following factors:

1. Aramid fiber is properly proportioned based on documentation comparing fiber feed to HMA/WMA mix production. A log of the total amount of aramid fibers applied certified by fiber manufacturer/supplier shall be required daily.
2. By visual inspection at the end of the mixing process, there is no clumping of aramid fiber or aramid delivery product and the aramid fibers are uniformly distributed.
3. All other mixture and density requirement of the asphalt as detailed in the Standard Specifications, current edition, shall apply.

PART 4 - MEASUREMENT AND PAYMENT

The Department will measure the quantity of Fiber Reinforcement for HMA/WMA as ton of asphalt placed with fibers. Each ton of asphalt placed with the aramid fibers according to this special note will be measured and paid for at the contract unit bid price per ton, and shall include full compensation for furnishing all labor, tools, equipment, and incidentals for doing all the work involved in

January 26, 2017

adding the fibers to HMA/WMA.

Code	Pay Item	Pay Unit
24785EC	Fiber Reinforcement for HMA	Tons

SPECIAL NOTE FOR PAVEMENT WEDGE AND SHOULDER MONOLITHIC OPERATION

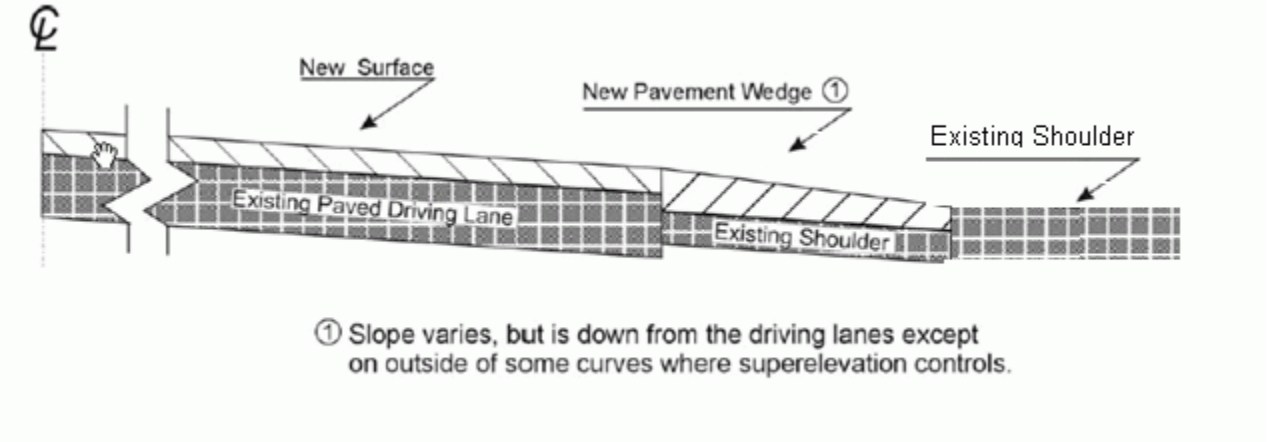
1.0 MATERIALS. Provide an Asphalt Surface Mixture conforming to Section 403 of the Standard Specifications, as applicable to the project, for the pavement wedge.

2.0 CONSTRUCTION. Place the specified Asphalt Surface Mixture on shoulders monolithically with the driving lane. Prime the existing shoulder with tack material as the Engineer directs before placing the wedge. Construct according to Section 403.03 of the Standard Specifications.

Equip the paver with a modified screed that extends the full width of the wedge being placed and is tapered to produce a wedge. Obtain the Engineer's approval of the modified screed before placing shoulder wedge monolithically with the driving lane.

The wedge may vary in thickness at the edge of the milled area in the shoulder. If the area to receive the shoulder wedge is milled prior to placement, during rolling operations pinch the outside edge of the new inlay wedge to match the existing shoulder elevation not being resurfaced. Unless required otherwise by the Contract, construct rolled or sawed rumble strips according to Section 403.03.08, as applicable.

The following sketch is primarily for the computation of quantities; however, the wedge will result in a similar cross-section where sufficient width exists. Do not construct a shoulder for placing the wedge unless specified elsewhere in the Contract.



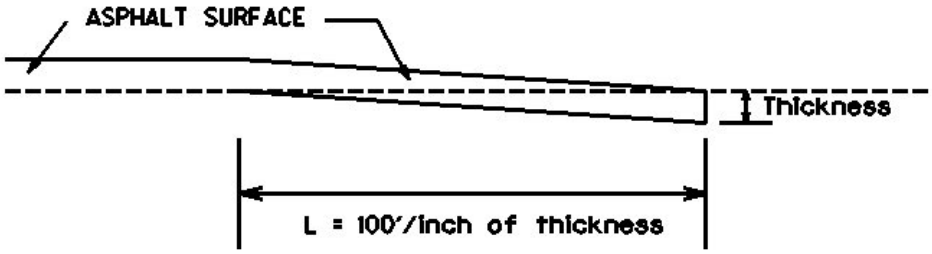
3.0 MEASUREMENT. The Department will measure Asphalt Surface Mixture placed as the pavement wedge according to Section 403.

4.0 PAYMENT. The Department will make payment for the completed and accepted quantities of Asphalt Surface Mixtures on pavement wedges according to Section 403.

SPECIAL NOTE FOR EDGE KEY

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

EDGE KEY



BEGINNING EDGE KEY

Thickness = 1.50 Inches

L = 150 LF

L= Length of Edge Key

ENDING EDGE KEY

Thickness = 0.75 Inches

L = 75 LF

L= Length of Edge Key

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

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

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the Standard and Supplemental Specifications and the Standard and Sepia Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

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

PROJECT PHASING & CONSTRUCTION PROCEDURES

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

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

LANE CLOSURES

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

SIGNS

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

CHANGEABLE MESSAGE SIGNS

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

BARRICADES

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

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

PAVEMENT MARKINGS

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

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

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

PAVEMENT EDGE DROP-OFFS

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

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

> Less than 2" - No protection required.

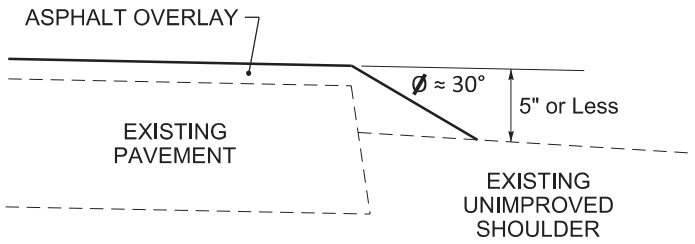
2” to 4” - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or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

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

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

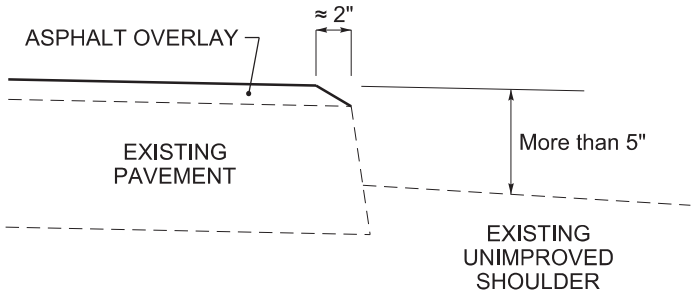
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of 5 inches or less)



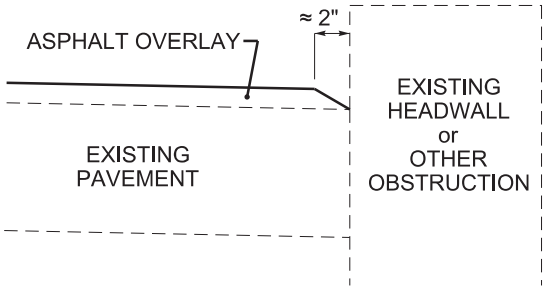
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of more than 5 inches)



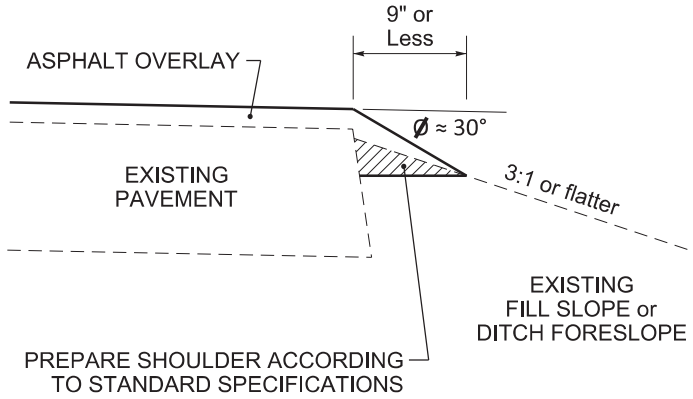
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to an obstruction, such as an existing headwall)



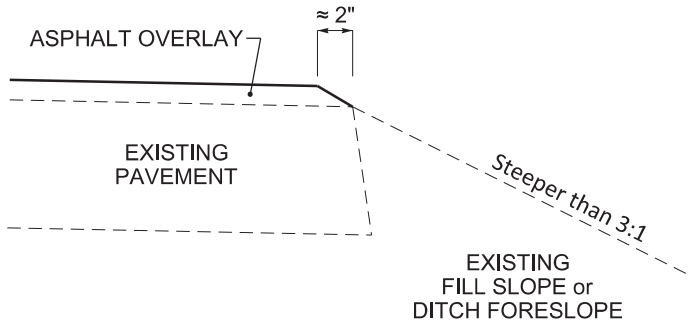
DURABLE PAVEMENT EDGE DETAIL

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



DURABLE PAVEMENT EDGE DETAIL

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



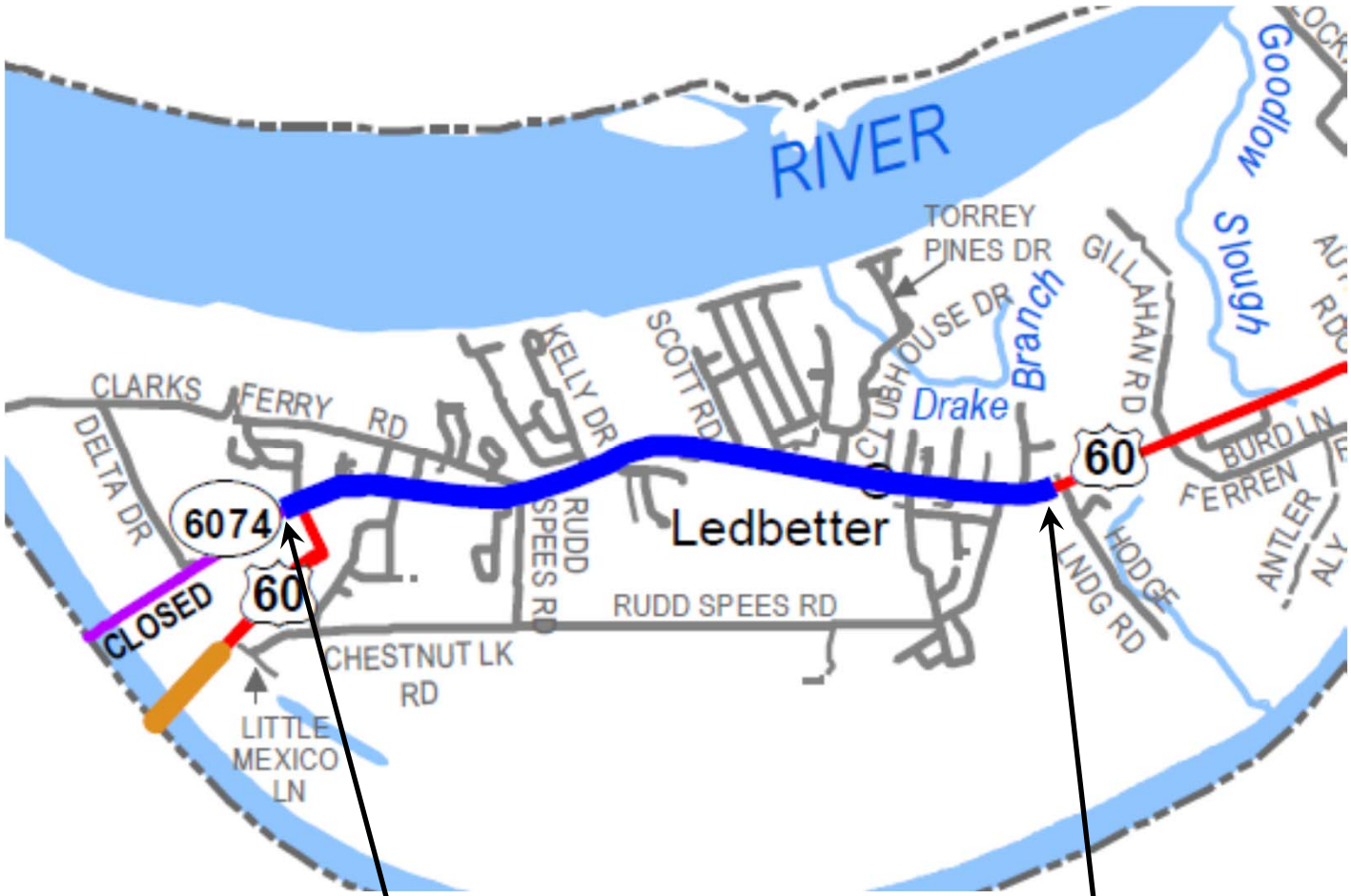
NOTES

1. DETAILS DO NOT APPLY TO OVERLAYS LESS THAN 1 INCH THICK.
2. THE DURABLE PAVEMENT EDGE DEVICE MAY BE DISENGAGED AT DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT, AS APROVED BY THE ENGINEER.

DRAWING NOT TO SCALE

DURABLE PAVEMENT EDGE DETAILS

Kentucky Department of Highways
Livingston County



FD05 070 0060 000-004

Pike County
THERMOPLASTIC INTERSECTION PAVEMENT MARKINGS SUMMARY
FD05 098 0119 000-003

MPT.	INTERSECTION	X-WALKS	STP BARS	ARROWS			"ONLY"	CATRAXX	RAILROAD		NOTES
		6 INCH	24 INCH	CURVE	STR	COMB		6 INCH	"R" 6 FOOT	CROSS BUCK 16"	
		LF	LF	EA	EA	EA	EA	LF	EA	LF	
2.66	KY 1426		36								
2.6	Left turn lane			1							
2.54	Left turn lane			1							
TOTAL			36	2							

County
TRAFFIC LOOP SUMMARY
FD05 098 0119 000-003

MPT.	INTERSECTION	SAW, SLOT AND FILL LF	LOOP WIRE LF	CONDUIT 1 1/4 INCH LF	CABLE NO. 14 LF	JUNCTION FIBER OP. LF	JUNCTION TYPE B EA	JUNCTION 10X8X4 EA			NOTES
0.215	planning traffic counter										
TOTAL		0	0	0	0	0	0	0			

NOTES:

Milling
Summary
FD05 098 0119 000-003

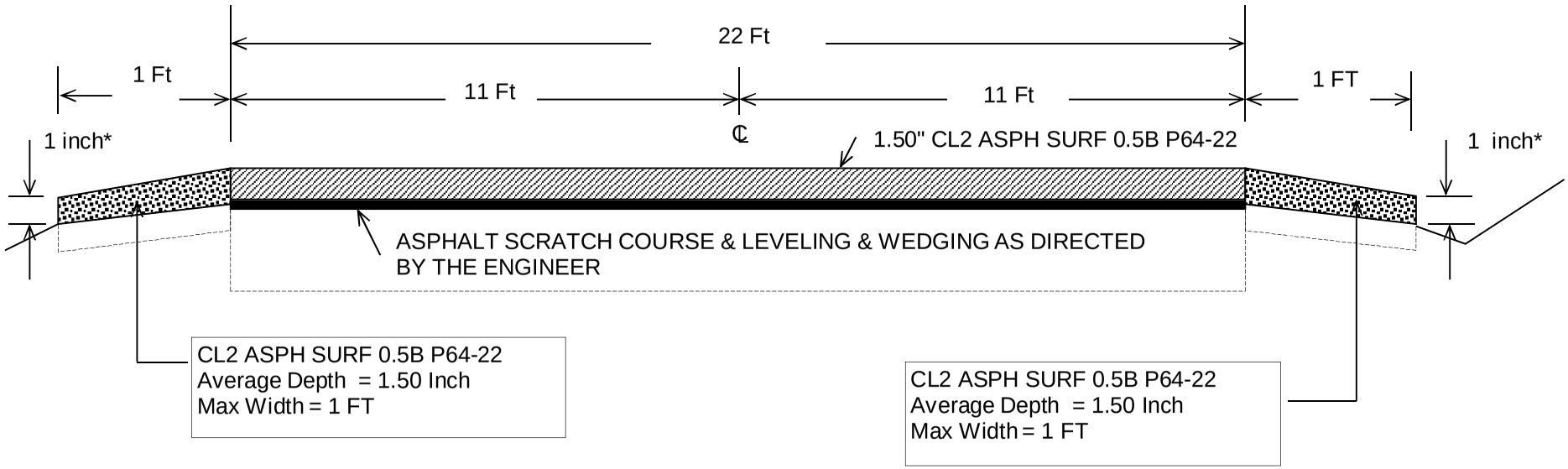
				Total	10540
Milepoint	**Comment**	**Length**	**Width**	**Avg Depth**	**Tons**
0.2	all paved surfaces including shoulder and turn lanes	13052	48	1.38	10540

TYPICAL SECTION

LIVINGSTON COUNTY

FD05 070 0060 000-004

MP's 1.090 - 2.090



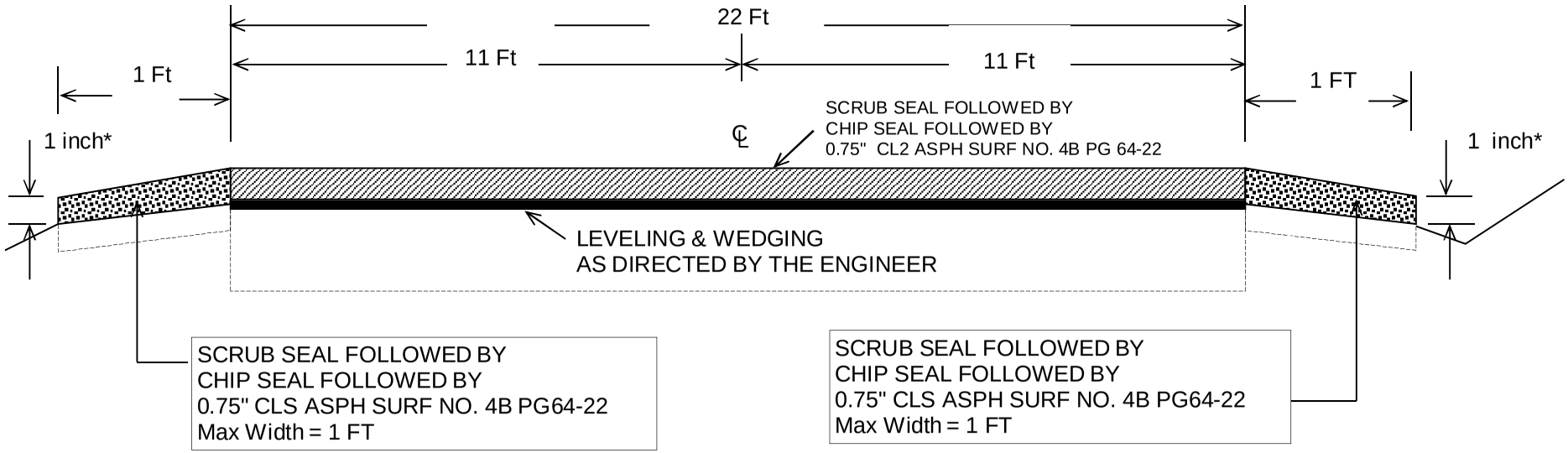
*** Where Existing Site Conditions Permit**

TYPICAL SECTION

LIVINGSTON COUNTY

FD05 070 0060 000-004

MP's 2.090 - 3.090



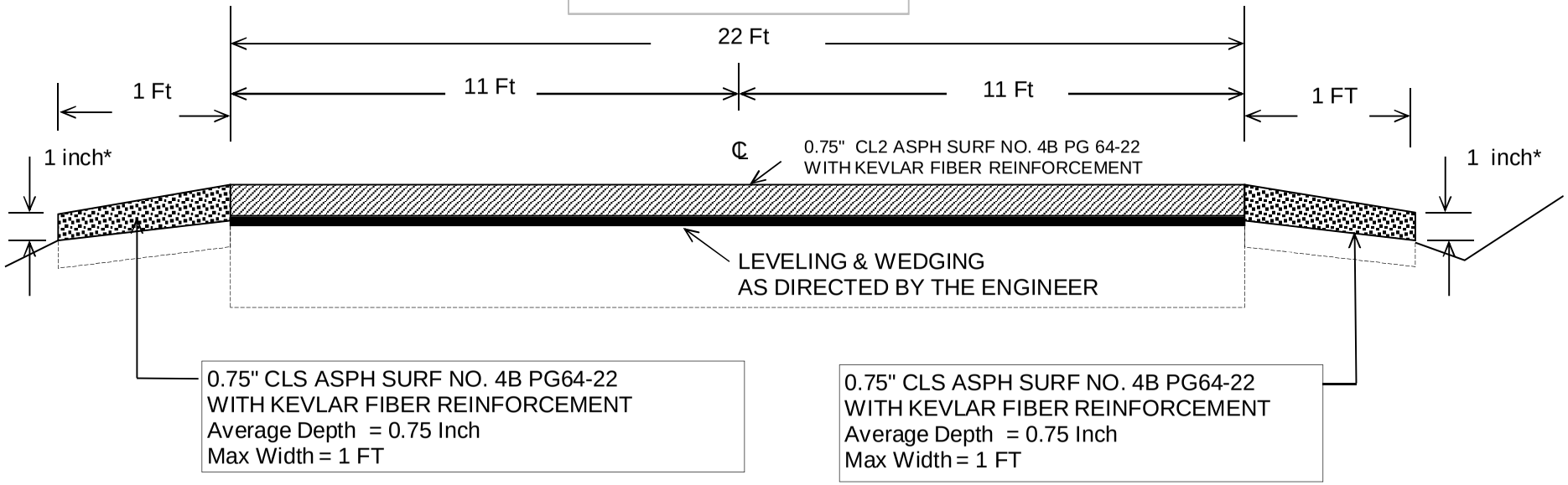
*** Where Existing Site Conditions Permit**

TYPICAL SECTION

LIVINGSTON COUNTY

FD05 070 0060 000-004

MP's 3.090 - 4.392



*** Where Existing Site Conditions Permit**

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

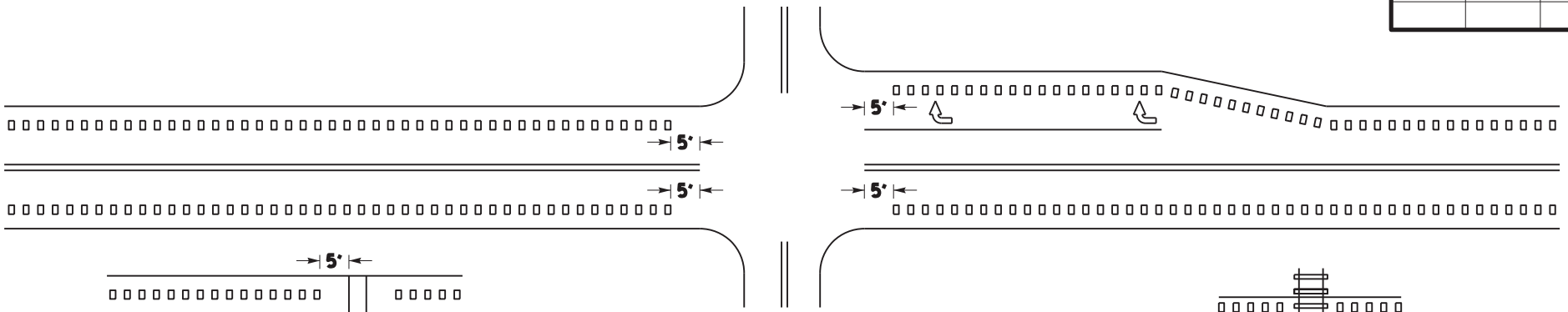
SUPPLEMENTAL SPECIFICATIONS

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

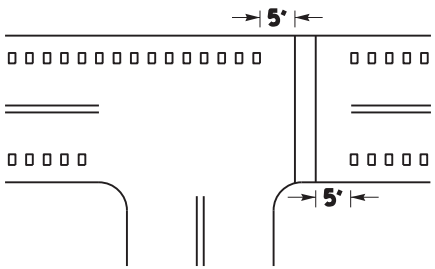
http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx

2016 KENTUCKY STANDARD DRAWINGS

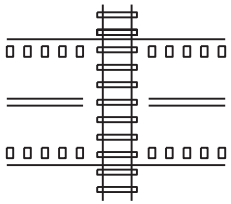
COUNTY OF	ITEM NO.	SHEET NO.



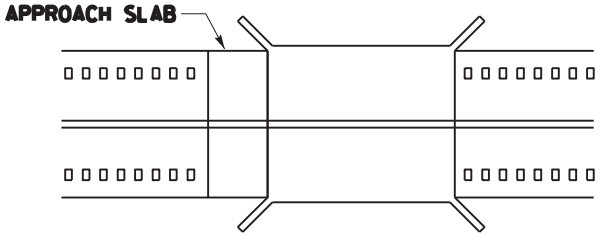
INTERSECTIONS WITH OR WITHOUT ①
RIGHT TURN LANES



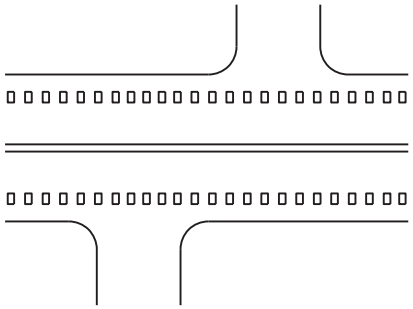
MARKED CROSSWALK ②



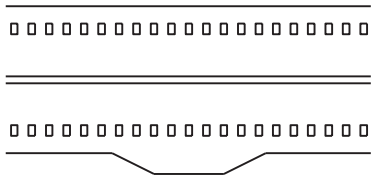
HIGHWAY-RAIL GRADE CROSSINGS ③



BRIDGE DECK/APPROACH SLAB ④



DRIVEWAYS/MINOR
COMMERCIAL ENTRANCES ⑤



MAILBOX TURNOUTS ⑥

~ NOTES ~

① RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, RIGHT-TURN LANES. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE EDGELINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE SIDE STREET RADIUS INTERSECTS MAINLINE).

② RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF MARKED CROSSWALKS.

③ RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.

④ RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.

⑤ RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.

⑥ RUMBLE STRIPS SHALL BE INSTALLED THROUGH MAILBOX TURNOUTS.

7. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEMS AND UNIT TO BID

EDGELINE RUMBLE STRIPS	LF
SHOULDER RUMBLE STRIPS	LF

DRAWING NOT TO SCALE

USE WITH SEPIA 006, 007, AND 008

KENTUCKY
DEPARTMENT OF HIGHWAYS

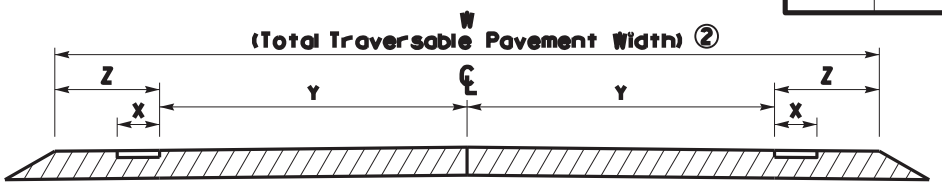
SHOULDER & EDGELINE RUMBLE STRIP DETAILS

SUBMITTED R. Jeffrey Wolfe 11-23-16
DATE

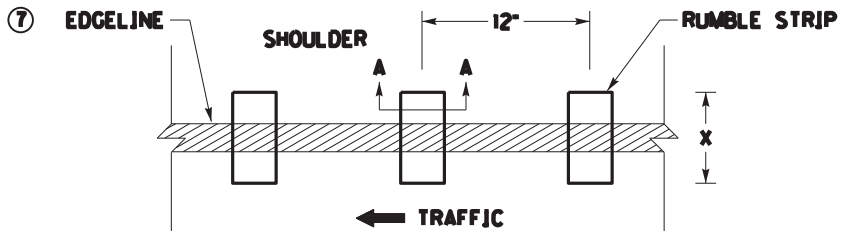
008

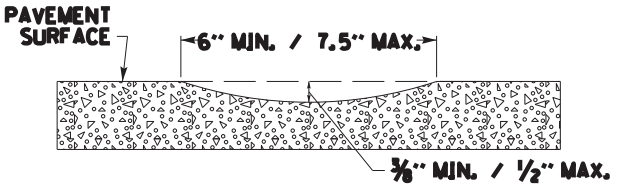
COUNTY OF	ITEM NO.	SHEET NO.

PAVEMENT WIDTH (W) ②	RUMBLE LENGTH (X) ⑥	ELRS ONLY		CLRS & ELRS	
		LANE WIDTH (Y) ③	SHOULDER WIDTH (Z) ④	LANE WIDTH (Y) ③	SHOULDER WIDTH (Z) ④
20'	8"	9'	1'	N/A	N/A
21'	8"	9.5'	1'	N/A	N/A
22'	8"	10'	1'	N/A	N/A
23'	8"	10'	1.5'	N/A	N/A
24'	8"	10.5'	1.5'	N/A	N/A
25'	8"	N/A	N/A	11'	1.5'
26'	8"	N/A	N/A	11'	2'
27'	8"	N/A	N/A	11.5'	2'
28'	8"	N/A	N/A	12'	2'
29'	8"	N/A	N/A	12'	2.5'
30'	8"	N/A	N/A	12'	3'
31'	8"	N/A	N/A	12'	3.5'
32'	8"	N/A	N/A	12'	4'
33'	8"	N/A	N/A	12'	4.5'



PAVEMENT CROSS-SECTION





SECTION A-A

~ NOTES ~

1. EDGELINE RUMBLE STRIPS SHOULD BE INSTALLED ACCORDING TO THE DIMENSIONS PROPOSED ABOVE UNLESS THERE IS AN ENGINEERING BASIS THAT SUPPORTS A CHANGE IN DIMENSION. FOR EXAMPLE, IF THE EXISTING LANE WIDTH IS NARROWER THAN THE LANE WIDTH PROPOSED IN THIS DRAWING AND THE EXISTING SHOULDER PAVEMENT DEPTH IS NOT SUITABLE TO BE CONVERTED INTO A PORTION OF THE PROPOSED LANE WIDTH, THEN THE EXISTING LANE WIDTH SHOULD BE USED INSTEAD OF THE WIDTH PROPOSED IN THIS DRAWING.

② PAVEMENT WIDTH (W) IS THE TOTAL WIDTH OF TRAVERSABLE PAVEMENT. DO NOT INCLUDE THE WIDTH OF ANY NON-TRAVERSABLE PAVEMENT, SUCH AS PAVEMENT WEDGES, WHEN MEASURING THE PAVEMENT WIDTH (W).

③ LANE WIDTH (Y) TO BE MEASURED FROM CENTER OF ROAD TO LANE SIDE EDGE OF RUMBLE STRIP.

④ PAVED SHOULDER WIDTH (Z) TO BE MEASURED FROM LANE SIDE EDGE OF RUMBLE STRIP TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT.

5. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED IN THIS DRAWING, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.
NOTE: CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHEN THE LANE WIDTH (Y) IS LESS THAN 11 FT.

⑥ RUMBLE LENGTH (X) MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF THE SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN THE PROPOSED RUMBLE LENGTH (X).

⑦ PLACE THE EDGELINE MARKING IN THE CENTER OF THE RUMBLE STRIP.

8. EDGELINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEM AND UNIT TO BID
EDGELINE RUMBLE STRIPS LF

DRAWING NOT TO SCALE

USE WITH SEPJA 005

KENTUCKY
DEPARTMENT OF HIGHWAYS

EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS

SUBMITTED R. Jeffrey Wolfe 11-23-16
DATE

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

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

I. APPLICATION

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

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

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

II. NONDISCRIMINATION OF EMPLOYEES

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

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

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

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

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

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

Revised: January 25, 2017

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

a) The date of leaving office or termination of employment; or
b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: January 27, 2017

Kentucky Equal Employment Opportunity Act of 1978

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

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

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

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

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

EMPLOYEE RIGHTS
UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

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

OVERTIME PAY

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

CHILD LABOR

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

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

No more than

- **3** hours on a school day or **18** hours in a school week;
- **8** hours on a non-school day or **40** hours in a non-school week.

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

TIP CREDIT

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

ENFORCEMENT

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

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

ADDITIONAL INFORMATION

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

For additional information:

1-866-4-USWAGE

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

U.S. Wage and Hour Division

WWW.WAGEHOUR.DOL.GOV

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

WHD Publication 1088 (Revised July 2009)

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

172200

PROPOSAL BID ITEMS

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Report Date 5/2/17

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00083		CRUSHED AGGREGATE SIZE NO 8 \	155.00	TON		$	
0020	00190		LEVELING & WEDGING PG64-22	527.00	TON		$	
0030	00191		ASPHALT SCRATCH COURSE PG64-22	387.00	TON		$	
0040	02562		TEMPORARY SIGNS	510.00	SQFT		$	
0050	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0060	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0070	02677		ASPHALT PAVE MILLING & TEXTURING	80.00	TON		$	
0080	02697		EDGELINE RUMBLE STRIPS	34,690.00	LF		$	
0090	06510		PAVE STRIPING-TEMP PAINT-4 IN	100,000.00	LF		$	
0100	06514		PAVE STRIPING-PERM PAINT-4 IN	68,000.00	LF		$	
0110	06568		PAVE MARKING-THERMO STOP BAR-24IN	22.00	LF		$	
0120	06600		REMOVE PAVEMENT MARKER TYPE V	447.00	EACH		$	
0130	10020NS		FUEL ADJUSTMENT	4,713.00	DOLL	$1.00	$	$4,713.00
0140	10030NS		ASPHALT ADJUSTMENT	11,838.00	DOLL	$1.00	$	$11,838.00
0150	23362ES403		CL2 ASPH SURF 0.5B PG64-22	1,165.00	TON		$	
0160	24785EC		FIBER REINFORCEMENT FOR HMA	756.00	TON		$	
0170	24858EC		POLYMER ASPHALT EMULSION FOR SCRUB SEAL	21.00	TON		$	
0180	24883EC		SCRUB SEAL AGGREGATE (NO. 11'S)	155.00	TON		$	
0190	24888EC		CL2 ASPH SURF NO.4B PG64-22	1,336.00	TON		$	

Section: 0002 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0200	02569		DEMOBILIZATION	1.00	LS		$	