Matthew G. Bevin
Governor

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

Greg Thomas
Secretary

January 17, 2017

CALL NO. 108
CONTRACT ID NO. 174100
ADDENDUM # 1

Subject: Various Counties, HSIP 9010 (264)
Letting January 27, 2017

(1) Revised – Special Notes – Pages 17-28 of 134
(2) Revised – Striping List – Pages 37-38 of 134
(3) Deleted – Pages 114 and 121-129 of 134

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:ks
Enclosures

# SPECIAL NOTES FOR WATERBORNE PAINT STRIPING AND DURABLE WATERBORNE PAINT STRIPING 2017 DISTRICT WIDE CONTRACTS

## DESCRIPTION

Except as specified herein, perform all work according to the Commonwealth of Kentucky, Transportation Cabinet, Department of Highways' 2012 Standard Specifications for Road and Bridge Construction; Supplemental Specifications; applicable Standard and Sepia Drawings; applicable Special Notes and Special Provisions; and Kentucky Methods; current editions. Section references are to the Standard Specifications.

## SCOPE OF WORK

Furnish and apply waterborne striping paint for 4 inch lines and durable waterborne striping paint for 6 inch lines, reflectorized with glass beads, to the sections of roadway provided in this contract with an updated listing provided at the pre-construction meeting. This contract is for the installation of centerlines, lane lines, edgelines, ramp lines, dotted lines and gore markings only. Gore marking materials shall be the same as the mainline of the roadway. Special markings such as stop bars, crosswalks, cross-hatching, railroad markings, etc. are not to be installed under this contract.

Intersection approach markings such as the edgelines of large painted islands or edgelines on mountable medians may be included at the discretion of the Engineer provided they can be painted by the striping truck. Markings that would require application by equipment other than the striping truck are not to be installed under this contract.

Retrace existing lines on the listed routes. The Department will pre-mark any section of roadway where there are no existing markings, old markings are no longer visible, or where the existing markings are to be changed. Do not place edge lines on any section of roadway where edgelines do not currently exist without written authorization from the Chief District Engineer.

## MATERIALS FOR WATERBORNE AND DURABLE WATERBORNE PAINT STRIPING

*PAINT:* Furnish paint materials for this project to meet the performance requirements detailed in Sections 842 and 846 of the Standard Specifications, except that yellow composition shall have a contrast ratio at 15 mils wet film thickness of 0.980.

Submit initial samples for each paint formulation for approval prior to initiation of the striping operation. The Contractor’s paint manufacturer may submit the initial sample directly to the Department. The Department will obtain subsequent samples of paint in accordance with the

Materials Field Sampling Manual when striping operations are in progress. A minimum of one sample will be obtained per color, per truck, per week and shall represent the quantity of striping applied per week. Deductions for application of non-specification paint shall be assessed to the quantity of striping represented by the sample.

*BEADS:* Use sufficient beads to ensure the pavement marking material meets retroreflectivity requirements. The Department will evaluate beads as part of the installed pavement marking in accordance with Kentucky Method 202 or 203 as applicable. Testing of the coatings, gradation and quality of the product applied shall be the responsibility of the contractor.

## MATERIALS SAMPLING AND ACCEPTANCE

If two or more random samples obtained during striping operations fail to meet minimum compositional requirements, striping operations shall be discontinued at the discretion of the Engineer. In the event striping operations are discontinued, the Department will randomly sample and test each batch of paint the contractor has in stock at the storage location.

For batches of paint that fail to meet the minimum compositional criteria, the stock material will be rejected. The contractor will be required to remove all failing paint from his central storage location. Batches that are tested and found to be in compliance with the compositional requirements may be used. After the Department has sampled all of the material at the central storage area, sampling and testing will resume according to the Materials Field Sampling Manual as soon as striping operations resume.

A deduction in payment will be made for any paint used that fails to meet ~~the~~ material requirements according to Sections 842 and 846 as applicable.

## EQUIPMENT

Each striper shall be equipped with electrical foot counters. The counters shall individually tabulate the amount of footage applied by each striping gun on the carriage, whether solid or dashed. The counters shall be capable of measuring up to six digits and shall have a reset feature. The counters shall be calibrated in the presence of a Department representative to insure an accurate measurement of the paint applied. Perform the calibration prior to starting striping operations and as necessary thereafter. When done, the Department's representative will record the calibrations on the Engineer's Daily Work Report (DWR).

Each striper shall be equipped with an accurate dashing mechanism, capable of being adjusted to retrace existing lane line, dotted lines or centerline markings as directed by the Engineer. The striper shall also be equipped with a detection device that will automatically cutoff the paint guns when a raised or recessed pavement marker is detected in the pavement. The Contractor, at his own expense, shall replace or adequately clean any pavement marker lens that is painted.

Equip each striper with a Data Logging System (DLS) that will record operational details during striping operations, store data, and generate and transmit reports on a daily basis to the manufacturer's secure server. Provide only DLS equipment certified by the manufacturer. Ensure the raw data is in comma or spaces delimited text file or other method adequate that is capable of being downloaded for insertion into an Excel computerized spreadsheet. The DLS shall monitor and report the quantities of paint and beads consumed in line and calculate, in real time, the gallons of paint per mile, average wet film thickness, and pounds of beads per gallon of paint for each line application. The DLS shall monitor and report the ambient temperature, pavement temperature, and paint temperature, and record the data at the beginning of each line application and at a minimum of 1 mile increments during application. The DLS shall be capable of storing and supplying the necessary scaling and calibration parameters to the flow meters, and shall provide a means of adjusting the scaling factor as necessary. The DLS shall include a remote cab mounted display, which shall indicate in real time, pavement temperature, application rate of paint in gallons per mile, paint film thickness in mils, and application rate of beads in pounds per gallon. In addition the Contractor's striper shall also be equipped with a calibrated measuring device for monitoring quantities of paint and beads consumed in line. Submit to the Engineer the Dailey Striping Report (DSR) and transmit to the manufacturer's secure server a DLS report as raw data containing the following information: route, the beginning and ending mile points, the beginning and ending coordinates determined by a Global Positioning System receiver with a 16 foot accuracy and the direction of travel, line type, line width, line color, direction of application, weight of paint applied in pounds or number of strokes counted, appropriate scaling factors, paint film thickness in mils, paint application rate in gallons per mile, bead application rate in pounds per gallon, paint temperature obtained immediately after the heat exchanger, ambient temperature, pavement temperature, and vehicle speed in miles per hour. Application and temperature data shall be reported in one-mile increments for each line applied. Provide GPS mapping system that is capable of real time (within 20 minutes except when cellular or wi-fi service is not available) tracking of material application rates, film thickness, beads pounds per gallon, vehicle speed, time, date, project numbers, operator manual data, and color coded alarms for film thickness. Film thickness alarms must have a tolerance of ±0.5 mils. Provide the Department access to stored data on the manufacturer's secure password protected website. The Department reserves the right to obtain any and all raw data recorded by the DLS at any time during this Contract. The Engineer may require field verification of the DLS operation and calibration at any time to ensure the accuracy of the DLS data and output. If field personnel suspect that the DLS data and/or output are not accurate, the Engineer may direct additional checks be performed.

Prior to starting striping operations, make all stripers available at a central location within Kentucky designated by the Department for inspection by the Department for compliance to Kentucky Method 64-267 and DLS requirements. Striping trucks that can fulfill the requirements of this method and these notes will be approved for use on this contract. Striping trucks that have not been approved for use by Department personnel will not be allowed to stripe as part of this contract. The Department reserves the right to perform random field verifications of striping equipment during this contract.

The Engineer may require the Contractor to provide detailed operating instructions from the manufacturer of the striping equipment and/or the DLS if quality or reporting issues arise at any

time during the contract. The Contractor shall then be required to operate the striping equipment within the suggested operating guidelines of the manufacturer, with particular emphasis on the speed of the striping operation, or make other adjustments until the quality of the striping is satisfactory to the Engineer.

The Contractor shall provide a separate sweeping unit powerful enough to remove normal highway dirt and debris. This unit shall not be a part of the striper.

## CONSTRUCTION

Except as specified herein apply all striping according to Section 713.

## SURFACE PREPARATION

Prepare the pavement surface for the striping operation in accordance with Section 713.03.02. Sweep all pavement surfaces prior to striping and maintain the cleaning operation far enough in advance of the striping operation to prevent any dust from the cleaning operation from mixing with the paint. The sweeper must maintain contact with the roadway. When the Engineer determines abnormal amounts of debris or other material have accumulated beyond the capability of the required sweeping unit which will require shoveling or other means to remove, the Engineer will make arrangements, prior to painting, to have the material removed by the Department or that section of roadway will be deleted from the contract.

## QUALITY CONTROL (QC) and QUALITY ASSURANCE (QA)

The Contractor shall designate a Quality Control Coordinator (QCC) for the project who will be the contact person for any questions or concerns regarding the quality of the work performed under this contract. The QCC shall:

- Hold current qualification from the Department as a Pavement Marking Inspection Technician;
- Plan and oversee the Contractor's evaluation of the lines applied on the project;
- Complete and submit Daily Striping Reports to the Engineer within 24 hours of completion of that days striping;
- Ensure that the DLS manufacturer makes available to the Engineer electronic DLS raw data from the secure server at any time.
- Verify the electronic records are completed and received by the Engineer prior to the records being removed from the pavement marking equipment.
- Coordinate and review or Perform KM-202, for each section of striping and provide completed test reports (electronic copy) along with printouts from the handheld retroreflectometer to the Engineer within one (1) working day of completion;
- Document all adjustments made to the application process to consistently produce the quality of line desired.

- Notify the Engineer of any changes in the striping work plan that are determined necessary
- Inform and mobilize crews to complete restriping or corrective work (after notification by the Department);
- Supply the appropriate certifications for paint and the DLS to the Engineer assigned to the particular project at the time of sampling;
- Track the quantities of materials supplied by the Contractor's vendors and applied by the painting crew;
- Meet with the Engineer to discuss and/or conduct field reviews on the project throughout the execution of the contract;
- Perform QC testing in accordance with KM-202 for each section of striping on zones selected by the Department based on KM-64-113 The Department will **NOT** provide advanced notice of the randomly selected zones to the Contractor prior to the striping being placed, but will only provide the locations for each randomly selected zone on the day of the test. The Department's QA inspector will coordinate the date of the test with the Contractor's QCC. .

At the Pre-construction Conference, the Contractor shall furnish the Department for approval a Quality Control Plan (QCP) that covers in detail the following items:

- The name, address, phone and fax numbers for the QCC;
- The names of individuals other than the QCC taking readings in accordance with KM-202 (these people shall hold qualification from the Department as Pavement Marking Inspection Technicians);
- An overall work plan which states the estimated starting and completion dates for the entire project, the number of crews to be used on the project and a general description of how the project will be completed;
- A description of the striping equipment to be used on the project, including make and model of each striper, minimum and maximum operating speeds, and type of instruments to be used to calibrate the flow of paint and beads;
- The frequency and method to be used to monitor application rates and quality of the line (specifically with regard to retroreflectivity, width, thickness, bead distribution, tracing accuracy, etc.);
- A list of paint(s) and bead(s) to be used in this contract along with a statement from the paint manufacturer that indicates the recommended minimum and maximum application temperatures for ambient temperature, pavement temperature, paint temperature, and guidelines for any other environmental factors that would adversely affect the successful performance of the paint;
- The contact person, phone, e-mail and fax numbers for reporting claims for paint on vehicles;
- A description and product literature of the reflectometer to be used by the Contractor;
- A description, product literature, and manufacturer's certification that the DLS conforms to contract requirements;
- The manufacturer's sampling procedure for sampling paint from the tote.

Obtain the Engineer's acceptance of the Contractor's QCP prior to the start of work. The Department reserves the right to require the Contractor to make changes in the QCP to obtain the quality specified in the contract.

After acceptance by the Department, the Contractor shall notify the Engineer in writing of any proposed change(s) to the QCP. Proposed changes are subject to acceptance by the Department.

The Department will perform Quality Assurance (QA) testing on (at least) one segment of each section of striping completed by the Contractor. QA testing is intended to verify the Contractor's QC test data. Upon receipt of the Contractor's QC test reports for each section, the QA Inspector will randomly select (at least) one segment for QA evaluation. The Department will **NOT** provide advance notice to the Contractor of the selected segment. The Department will perform the test in accordance with KM-202 with the exception that QA testing will be conducted within the later of 30-60 calendar days after the striping application or 2 weeks of receipt of the Contractor's QC report.

The Department will base payment for each section evaluated in accordance with KM-202 on the Contractor's QC test results if the QC and QA mean values for each segment selected for QA testing differ by less than 10% of the QA mean value.

If a dispute should arise regarding the acceptability of the Contractor's QC test results the dispute resolution shall be conducted as follows:

1. If the retroreflectivity values obtained during the QA testing within a segment indicate a change in pay quantities (i.e. QC readings are passing and QA readings are failing) and the mean values differ by more than 10% of the QA mean value; additional testing will be required. Discard the original QC and QA test results for the section in question. The QA will randomly establish three new zones, in accordance with KM-113, in each segment within the section in question. The QC and QA will jointly evaluate each new zone within the section in accordance with KM-202 (with the exception of the evaluation period if greater than 60 days). The QC test results for each segment will be used for evaluation of the section if the QC and QA mean values for each segment differ by less than 10% of the QA mean value.

2. If the variance between QC and QA testing does not indicate a change in the pay quantities for the section (i.e. QC and QA readings are both passing) however, the QC mean values differ by more than 10% of the QA mean value, additional readings will not be required. Accept the QC test results for evaluation of the section. However, additional testing within the section in question should be conducted as soon as possible to determine the cause of the discrepancy. The Contractor and the Engineer shall document the resolution to the discrepancy.

3. If resolution to a dispute or variance of QC and QA test results cannot be achieved by the QC and QA, additional testing will be required. Discard the QC and QA test results for the section in question. Additional testing will be conducted by the QC, QA, and representatives of Central Office Division of Materials. Additional testing will be conducted within two

weeks of receipt of a written request from the Engineer to the Division of Materials for each section in question. Three new zones, randomly selected in accordance with KM-113, will be established by the QA for each segment of the section in question. Each instrument to be used for testing will be calibrated in the presence of Central Office representatives prior to initiation of testing. The QC, QA and Central Office representatives will obtain readings for each new zone in accordance with KM-202 (with the exception of the evaluation period if greater than 60 days). The QC test results for each segment will be used for evaluation of the section if the QC mean values for each segment differ by less than 10% to the mean value obtained by Central Office. The QA test results for each segment will be used for evaluation of the section if the QC mean values differ by more than 10% to the mean value obtained by Central Office and the QA mean value differs by less than 10% to the Central Office mean value. If neither the QC nor QA mean values meet these requirements, the Central Office mean value for each segment will be used to evaluate the section in question. These results will be final and the basis of payment for the section in question.

The Contractor shall incur all costs associated with additional testing performed by Department personnel for dispute resolution that does not result in the use of QC test data as the basis of payment. These costs will include the cost to maintain and control traffic.

The Department reserves the right to take over the QC portion of testing. In the event that the Department exercises this option, the Contractor will incur the cost of testing performed by the Department.

The Department reserves the right to evaluate retroflectivity on designated routes, in whole or in part, in accordance with KM-203. The Department will identify routes or portions of routes to be evaluated in accordance with KM-203. The evaluation of a section in accordance with KM-203 will be conducted at the Departments expense.

The Department will require the Department's approved vendor performing retroflectivity evaluation in accordance with KM-203 to successfully demonstrate compliance to his/her quality control procedures prior to collection of data for this contract. The Department will select an appropriate test site for demonstration purposes and conduct joint evaluations of both yellow and white longitudinal markings within the test site using approved 30M geometry handheld instruments. The demonstration will be deemed successful if the mean average obtained by the approved vendor differs by less than 10% to the mean average obtained by the Department for each marking evaluated within the test site.

The Department will base payment for each section evaluated in accordance with KM-203 solely on the test results obtained by the Department's approved vendor. Completed test results submitted by the Department's approved vendor will be considered final and are not subject to dispute.

The Department will furnish the Contractor with a blank electronic copy of the Contractors Daily Striping Report (DSR). The Contractor shall complete and furnish this standard DSR to the Engineer's office daily for each crew for each color and width of line applied. The information on the DSR shall reflect the milepoints and quantities for striping completed for that day and for

that crew. The Contractor shall also include with the DSR the certification for the paint used on that day's striping according to Section 842.05 and 846.05, as applicable.

Transmit DLS raw data on a daily basis to the manufacturer's secure server. Ensure that the DLS manufacturer makes the DLS raw data available from the secure server to the Department's designated field personnel. Verify the electronic records are completed and received by the Engineer prior to the records being removed from the pavement marking equipment.

## APPLICATION OF STRIPING

Roadways shall be marked with 4", 6", 8" and 12" lines as indicated in the summaries and/or as directed by the Engineer. The four-inch line shall be not less than four inches nor more than five inches in width. The six-inch line shall be not less than six inches nor more than seven inches in width. The centerline of all newly applied lines shall be within one inch of the centerline of the existing stripe. Mark all Interstate and Parkway System Routes and other routes listed on the summaries for 6 inch striping using Durable Waterborne Paint meeting the requirements of Section 846, except as specified herein. Mark all other routes with four-inch lines using Waterborne Paint meeting the requirements of Section 842, except as specified herein. Apply Gore area markings at twice the width of the normal line width on that portion of roadway. All lines shall have distinct, clean edges with proper bead distribution across the entire width and length of the line.

Passing zones and lane lines shall be installed as a 10' segment of paint with a 30' gap. The length of the 10' segment shall not be less than 10' nor longer than 10 feet 6 inches. The stripe-gap cycle shall be not less than 39 feet 6 inches and no longer than 40 feet 6 inches.

Apply paint, in a single pass, in accordance with the application rates in Section 713.03.03. Contrary to Section 713.03.03, the Contractor may apply beads at any application rate that meets the retroreflectivity requirements of Section 713.03.05.

The Contractor shall be responsible for protecting the painted line from traffic until dry in order to eliminate tracking. Retroreflectivity readings will be taken on zones with substantial amounts of tracking and the readings will be used in the calculation of payment. If the contractor elects to use additional traffic control devices beyond what is specified in the TRAFFIC CONTROL PLAN, the additional cost shall be incidental to the bid item "Maintain and Control Traffic".

If the Engineer determines that the quality of the striping applied by the Contractor is unsatisfactory with regard to retroreflectivity, bead distribution, paint thickness, overspray, accuracy of retracing, line width, consistency, tracking, etc., the Engineer may stop the striping operation immediately until the Contractor can demonstrate that the problem has been corrected. If it is determined by the Engineer that the striping is not applied at the specified application rate, restriping will be required.

## CLEANING OF APPLIED STRIPING

The contractor has the option to clean accumulated debris from affected route prior to performing QC testing. Cleaning is defined as a single pass using the broom truck to remove accumulated debris from the affected striping. Notify the Engineer 48 hours prior to performing the cleaning operations.

## MARKING REMOVAL

The Contractor shall be responsible for all necessary cleanup of any paint or other material that is spilled onto the pavement or elsewhere as a result of his operations and for correcting any striping error (including tracking and rain damage) that the Engineer determines removal to be required. Contrary to Section 713.03.04, remove all striping errors or paint spills by water blasting only (see attached note) at no additional cost to the Department. This removal process shall be performed in a manner that shall not be detrimental to the pavement. Upon notification of a striping error or paint spill by the Engineer, the Contractor shall be required to begin the process of correcting the striping error or paint spill within five (5) working days and shall work continuously to complete the corrective work prior to striping any other section of roadway included in this contract.

Prior to retracing, the Engineer will notify the Contractor if existing striping errors need to be removed. Contrary to Section 713.03.04, remove all existing striping errors by water blasting only (see attached note). The Department will measure and pay for water blasting removal of existing stripes directed by the Engineer in linear feet.

## PAINT ON VEHICLES

The Contractor shall be responsible for addressing disputes with the public regarding paint on vehicles that occur as a result of his operations. All complaints from the public shall be addressed in a timely manner and the Contractor must demonstrate a “good faith” attempt to resolve disputes to the satisfaction of the citizen. However, the Contractor shall have the right to dispute fault and refuse settlement in cases where the Contractor feels that paint on the vehicle was a result of negligence on the part of the citizen. Unresolved disputes involving paint on vehicles shall be handled through the legal system. The Department shall not be held responsible for paint on vehicles under any circumstances.

## RETROREFLECTIVITY REQUIREMENTS

The minimum retroreflectivity requirements shall be in accordance with Section 713.03.05A of the Standard Specifications.

Restriping will be required for striping that fails to meet the minimum retroreflectivity requirements. The provisions for restriping are described in the section of this contract entitled

MEASUREMENT AND PAYMENT. Complete the restriping within 15 calendar days after notification by the Engineer except that no striping will be performed after **October 15, 2017**. All aspects of this specification shall apply to lines that are repainted due to failure to meet the requirements of this specification including the retroreflectivity requirements.

## SCHEDULING

At the Pre-construction conference, the Engineer may provide the contractor with a list of Priority Routes (not to exceed 10 percent of the total project estimate) which are to be striped prior to **June 1, 2017**. The painting of all scheduled routes shall be completed by **August 1, 2017.**

The Contractor shall coordinate the daily striping schedule, one week in advance, with the Engineer. The Contractor shall ensure that once striping begins on a section that ALL striping on that section must be completed within two weeks. Failure to comply with this requirement will result in withholding of pay estimates.

The Engineer may eliminate any route from the schedule at any time prior to striping if it is determined that the route does not require retracing. Also, the Engineer may add additional routes to be striped. The Contractor shall be notified of added routes prior to July 1, 2017.

## CONTRACT COMPLETION AND LIQUIDATED DAMAGES

All priority routes shall be striped by June 1, 2017. Contrary to the Standard Specifications, no time extension will be granted for failure to complete striping of these priority routes by the June 1, 2017 milestone completion date. Liquidated damages in the amount specified in Section 108.09 of the Standard Specifications will be assessed for each day that any priority route remains unstriped after June 1, 2017.

Sections that are required to be re-striped due to failure to meet retroreflectivity requirements must be completed within 15 calendar days after notification by the Engineer. The Department will assess Liquidated Damages in the amount specified in Section 108.09 of the Standard Specifications for each day beyond the 15 calendar days that the restriping is not completed and shall accrue until October 15, 2017. All re-striping must be complete by October 15, 2017. Failure to complete all necessary corrective work by the October 15, 2017 deadline will result in no additional payment for the stripe beyond the 50% that was initially paid for the installation of the stripe and payment will be based upon the Payment Schedule.

All routes that are required to be striped under this contract shall be completed by August 1, 2017. Contrary to the Standard Specifications, no time extension will be granted. Liquidated damages will apply in accordance with Section 108.09 of the Standard Specifications for failure to complete the striping by August 1, 2017. Liquidated damages will accrue until October 15, 2017; no striping shall be performed after this date.

Remove all striping errors and spills within five (5) working days after notification by the Engineer. Liquidated damages, in the amount specified in Section 108.09 of the Standard Specifications, shall apply for each day beyond the five (5) working days that the Contractor has not begun to correct the striping error/spill or continuously work to complete the corrective work.

The Department will apply all Liquidated Damages accumulatively.

## RE-TESTING OF FAILURES

The Department's costs associated with re-testing of striping failures for Kentucky Method 203 shall be reimbursed to the Department by the contractor. The reimbursement shall include mobilization of the Department's mobile striping vendor's mobile testing machine as well as the current per mile rate for the mobile striping according to the Cabinet's Master Agreement.

## MEASUREMENT AND PAYMENT

***STRIPING:*** The Department will measure the paint striping of each type in linear miles of paint stripe. The Department will measure the quantity at twice the rate for a 4-inch line when an 8-inch line is applied or twice the rate for a 6-inch line when a 12-inch line is applied.

The Department will pay 50% of the Contract Unit Bid price for the applicable bid items after application of all striping to a particular section of roadway. Contrary to Section 104.02.02, the overrun and underrun formula shall not apply to this contract. The remaining payment will be made based upon the following procedure and the Payment Schedule:

1. Each section of striping will be evaluated in accordance with KM-202 or KM-203, as applicable, and the QC/QA testing specified herein, for the purpose of evaluating retroreflectivity.

2. If a Section is accepted in accordance with the appropriate Kentucky Methods, the Department will make final payment according to the Payment Schedule listed below.

3. If a section is not accepted in accordance with the appropriate Kentucky Methods, restripe the entire section within fifteen (15) calendar days after notification by the Engineer subject to the same requirements as the original striping at no additional cost to the Department. If the restriped Section is accepted in accordance with the appropriate Kentucky Methods, the Department will make final payment according to the following Payment Schedule. If the section is not restriped by October 15, 2017, the Department will not make final payment and the Contractor shall accept the deduction in payment for the section that has been determined to be unacceptable.

**Payment Schedule**

| | Initial Payment | Final Payment | Total Payment |
|---|---|---|---|
| Section is Accepted | 50% | 50% | 100% |
| Section is Not Accepted | 50% | 0% | 50% |

***QUALITY CONTROL:*** The Department will measure and pay the quantity at the Contract unit price Each. The Department will not measure the QCP, the DLS, any actions and personnel required to carry out the QCP, any testing, any testing equipment, or any other work necessary to perform the specified QC/QA procedures for payment, but will consider them incidental to this item of work.

***MAINTAIN AND CONTROL TRAFFIC:*** See Traffic Control Plan.

***LAW ENFORCEMENT OFFICER:*** See Traffic Control Plan.

***WATER BLASTING EXISTING STRIPE:*** See Special Note for Water Blasting Existing Stripe.

| System | County | Prefix | Route | BMP | EMP | Miles | 4" W Miles | 4" Y Miles | System | County | Prefix | Route | BMP | EMP | Miles |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP | ALLEN | KY | 100 | 0 | 17.244 | 17.244 | 9.180 | 31.039 | MP | LOGAN | KY | 2145 | 0 | 0.089 | 0.089 |
| MP | ALLEN | US | 231 | 0 | 8.569 | 8.569 | 21.423 | 17.138 | MP | LOGAN | KY | 2146 | 0.000 | 0.746 | 0.746 |
| MP | ALLEN | KY | 234 | 0 | 6.381 | 6.381 | 12.762 | 11.4858 | RS | LOGAN | KY | 591 | 0 | 10.869 | 10.869 |
| RS | ALLEN | KY | 99 | 0 | 5.667 | 5.667 | 0 | 10.2006 | RS | LOGAN | KY | 663 | 0 | 17.743 | 17.743 |
| RS | ALLEN | KY | 240 | 0 | 1.078 | 1.078 | 0 | 2.156 | RS | LOGAN | KY | 722 | 0 | 4.332 | 4.332 |
| RS | ALLEN | KY | 671 | 0 | 4.57 | 4.57 | 0 | 8.226 | RS | LOGAN | KY | 739 | 0 | 4.7 | 4.7 |
| RS | ALLEN | KY | 1332 | 0 | 16.214 | 16.214 | 0 | 29.1852 | RS | LOGAN | KY | 775 | 0 | 3.949 | 3.949 |
| RS | ALLEN | KY | 1421 | 0 | 3.439 | 3.439 | 0 | 6.878 | RS | LOGAN | KY | 848 | 0 | 2.041 | 2.041 |
| RS | ALLEN | KY | 1533 | 0 | 5.779 | 5.779 | 0 | 10.4022 | RS | LOGAN | KY | 1038 | 0 | 12.698 | 12.698 |
| RS | ALLEN | KY | 1578 | 0 | 4.471 | 4.471 | 1 | 8.0478 | RS | LOGAN | KY | 1040 | 0 | 1 | 1 |
| RS | ALLEN | KY | 1855 | 0 | 6.077 | 6.077 | 0 | 10.9386 | RS | LOGAN | KY | 1040 | 0 | 10.865 | 10.865 |
| RS | ALLEN | KY | 3521 | 0 | 1.255 | 1.255 | 0 | 2.51 | RS | LOGAN | KY | 1041 | 0 | 10.022 | 10.022 |
| MP | BARREN | KY | 90 | 0 | 22.022 | 22.022 | 46.7665 | 41.902 | RS | LOGAN | KY | 1151 | 0 | 17.307 | 17.307 |
| MP | BARREN | KY | 252 | 0 | 11.115 | 11.115 | 0 | 20.007 | RS | LOGAN | KY | 1153 | 0 | 5.466 | 5.466 |
| RS | BARREN | KY | 335 | 0 | 0.712 | 0.712 | 0 | 1.2816 | RS | LOGAN | KY | 1293 | 0 | 5.112 | 5.112 |
| RS | BARREN | KY | 1330 | 0 | 4.522 | 4.522 | 0 | 8.1396 | RS | LOGAN | KY | 1308 | 0 | 5.051 | 5.051 |
| RS | BARREN | KY | 1342 | 0 | 2.093 | 2.093 | 0 | 3.7674 | RS | LOGAN | KY | 1785 | 0 | 1.326 | 1.326 |
| RS | BARREN | KY | 2065 | 0 | 1.242 | 1.242 | 0 | 2.2356 | RS | LOGAN | KY | 2369 | 0 | 3.903 | 3.903 |
| RS | BARREN | KY | 2143 | 0 | 1.238 | 1.238 | 0 | 2.2284 | RS | LOGAN | KY | 2371 | 0 | 2.934 | 2.934 |
| RS | BARREN | KY | 2189 | 0 | 6.01 | 6.01 | 0 | 12.02 | RS | LOGAN | KY | 2375 | 0 | 4.708 | 4.708 |
| RS | BARREN | KY | 2198 | 0 | 2.667 | 2.667 | 0 | 5.334 | RS | LOGAN | KY | 2377 | 0 | 6.459 | 6.459 |
| RS | BARREN | KY | 2207 | 0 | 4.477 | 4.477 | 0 | 8.0586 | RS | LOGAN | KY | 3201 | 0 | 5.181 | 5.181 |
| MP | BUTLER | KY | 70 | 25.002 | 30 | 4.998 | 9.996 | 8.9964 | MP | METCALFE | KY | 70 | 0 | 8.869 | 8.869 |
| RS | BUTLER | KY | 340 | 0 | 12.761 | 12.761 | 2.341 | 22.9698 | MP | METCALFE | KY | 80 | 0 | 7.888 | 7.888 |
| RS | BUTLER | KY | 369 | 0 | 0.626 | 0.626 | 0 | 0.666 | MP | METCALFE | KY | 163 | 0.000 | 11.220 | 11.220 |
| RS | BUTLER | KY | 411 | 0 | 8.822 | 8.822 | 0 | 15.8796 | MP | METCALFE | KY | 218 | 0 | 3.451 | 3.451 |
| RS | BUTLER | KY | 626 | 0 | 3.38 | 3.38 | 0 | 6.084 | MP | METCALFE | KY | 3524 | 0 | 1.39 | 1.39 |
| RS | BUTLER | KY | 1117 | 0 | 10.516 | 10.516 | 0 | 18.9288 | RS | METCALFE | KY | 314 | 0 | 6.463 | 6.463 |
| RS | BUTLER | KY | 3182 | 0 | 3.787 | 3.787 | 0 | 6.8166 | RS | METCALFE | KY | 543 | 0 | 3.606 | 3.606 |
| RS | BUTLER | KY | 3205 | 0 | 2.708 | 2.708 | 0 | 4.8744 | RS | METCALFE | KY | 640 | 0 | 16.723 | 16.723 |
| MP | EDMONSON | KY | 185 | 0 | 5.71 | 5.71 | 11.42 | 10.278 | RS | METCALFE | KY | 745 | 0 | 5.064 | 5.064 |
| MP | EDMONSON | KY | 259 | 8.839 | 22.24 | 13.401 | 26.802 | 24.122 | RS | METCALFE | KY | 1520 | 0 | 2.633 | 2.633 |
| MP | EDMONSON | KY | 3611 | 0 | 0.532 | 0.532 | 1.064 | 0.8512 | RS | METCALFE | KY | 2387 | 0 | 7.26 | 7.26 |
| RS | EDMONSON | KY | 422 | 0 | 2.909 | 2.909 | 0 | 5.2362 | RS | METCALFE | KY | 2390 | 0 | 2.485 | 2.485 |
| RS | EDMONSON | KY | 655 | 3.845 | 9.214 | 5.369 | 0 | 10.738 | RS | METCALFE | KY | 2435 | 0 | 3.456 | 3.456 |
| RS | EDMONSON | KY | 2067 | 0 | 0.748 | 0.748 | 0 | 1.3464 | RS | METCALFE | KY | 3234 | 0 | 3.539 | 3.539 |
| RS | EDMONSON | KY | 2336 | 0 | 3.522 | 3.522 | 0 | 6.3396 | MP | MONROE | KY | 163 | 0 | 18.126 | 18.126 |
| MP | LOGAN | KY | 106 | 0 | 15.175 | 15.175 | 0 | 27.315 | MP | MONROE | KY | 249 | 0 | 4.293 | 4.293 |
| MP | LOGAN | KY | 2138 | 0 | 0.317 | 0.317 | 0.634 | 0 | MP | MONROE | KY | 2165 | 0 | 0.251 | 0.251 |
| | | | | | | | W | Y | | | | | | | |
| | | | | | | | 710 | 926 | | | | | | | |

| 4" W Miles | 4" Y Miles | System | County | Prefix | Route | BMP | EMP | Miles | 4" W Miles | 4" Y Miles |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.178 | 0 | RS | MONROE | KY | 678 | 5.382 | 6.376 | 0.994 | 0 | 1.988 |
| 0 | 1.343 | RS | MONROE | KY | 792 | 0 | 0.647 | 0.647 | 0 | 1.1646 |
| 21.9 | 0 | RS | MONROE | KY | 870 | 0 | 4.21 | 4.21 | 0 | 7.578 |
| 35.5 | 0 | RS | MONROE | KY | 953 | 0 | 1.747 | 1.747 | 3.52894 | 0 |
| 8.7 | 0 | RS | MONROE | KY | 1324 | 0 | 0.285 | 0.285 | 0 | 0.513 |
| 9.87 | 0 | RS | MONROE | KY | 1860 | 0 | 1.947 | 1.947 | 0 | 3.5046 |
| 7.97698 | 0 | RS | MONROE | KY | 2164 | 0 | 0.398 | 0.398 | 0 | 0.7164 |
| 0 | 3.6738 | MP | SIMPSON | KY | 73 | 0.000 | 20.655 | 20.655 | 1.460 | 37.179 |
| 25.64996 | 0 | MP | SIMPSON | KY | 100 | 0 | 19.115 | 19.115 | 25.053 | 34.407 |
| 0 | 1.8 | MP | SIMPSON | KY | 383 | 7.250 | 9.513 | 2.263 | 0.00 | 4.073 |
| 21.9473 | 0 | RS | SIMPSON | KY | 103 | 0 | 2.666 | 2.666 | 0 | 5.332 |
| 20.24444 | 0 | RS | SIMPSON | KY | 591 | 0 | 5.601 | 5.601 | 11.31402 | 0 |
| 34.96014 | 0 | RS | SIMPSON | KY | 664 | 0 | 4.528 | 4.528 | 9.14656 | 0 |
| 11.04132 | 0 | RS | SIMPSON | KY | 664 | 4.528 | 7.145 | 2.617 | 0 | 4.7106 |
| 0 | 9.2016 | RS | SIMPSON | KY | 816 | 0 | 4.972 | 4.972 | 0 | 8.9496 |
| 10.20302 | 0 | RS | SIMPSON | KY | 1170 | 0 | 7.156 | 7.156 | 14.45512 | 0 |
| 0 | 2.652 | RS | SIMPSON | KY | 1434 | 0 | 3.831 | 3.831 | 7.73862 | 0 |
| 7.88406 | 0 | RS | SIMPSON | KY | 2349 | 0 | 3.846 | 3.846 | 7.76892 | 0 |
| 5.92668 | 0 | RS | SIMPSON | KY | 2601 | 0 | 3.792 | 3.792 | 7.65984 | 0 |
| 9.51016 | 0 | MP | TODD | KY | 104 | 0 | 14.246 | 14.246 | 0 | 25.6428 |
| 13.04718 | 0 | MP | TODD | KY | 178 | 0 | 3.123 | 3.123 | 0 | 5.6214 |
| 10.46562 | 0 | MP | TODD | KY | 181 | 0 | 28.002 | 28.002 | 56.004 | 50.404 |
| 0 | 10.13 | MP | TODD | KY | 1453 | 0 | 0.397 | 0.397 | 0 | 0.794 |
| 0 | 14.1984 | RS | TODD | KY | 107 | 0 | 13.976 | 13.976 | 0 | 25.1568 |
| 6.450 | 20.680 | RS | TODD | KY | 115 | 0 | 0.455 | 0.455 | 0 | 0.91 |
| 0 | 6.2118 | RS | TODD | KY | 189 | 0 | 1.891 | 1.891 | 3.81982 | 0 |
| 0 | 2.78 | RS | TODD | KY | 346 | 0 | 0.868 | 0.868 | 1.736 | 1.5624 |
| 0 | 11.6334 | RS | TODD | KY | 475 | 0 | 8.176 | 8.176 | 0 | 14.7168 |
| 7.28412 | 0 | RS | TODD | KY | 508 | 0 | 6.651 | 6.651 | 0 | 12.0294 |
| 0 | 30.1014 | RS | TODD | KY | 848 | 0 | 12.957 | 8.982 | 0 | 16.1676 |
| 10.22928 | 0 | RS | TODD | KY | 890 | 0 | 4.192 | 4.192 | 0 | 7.5456 |
| 0 | 5.266 | MP | WARREN | KY | 1297 | 0 | 9.264 | 9.264 | 0 | 16.6752 |
| 14.6652 | 0 | MP | WARREN | KY | 2158 | 0 | 3.546 | 3.546 | 0.664 | 7.092 |
| 5.0197 | 0 | MP | WARREN | KY | 3225 | 0 | 1.409 | 1.409 | 3.5225 | 2.5362 |
| 6.98112 | 0 | RS | WARREN | KY | 242 | 5.133 | 10.275 | 5.142 | 10.284 | 0 |
| 0 | 6.3702 | RS | WARREN | KY | 259 | 0 | 3.087 | 3.087 | 6.23574 | 0 |
| 37.503 | 32.7384 | RS | WARREN | KY | 263 | 8 | 14.421 | 6.421 | 12.97042 | 0 |
| 0 | 7.7274 | RS | WARREN | KY | 626 | 5.882 | 8.298 | 2.416 | 4.88032 | 0 |
| 0 | 0.502 | RS | WARREN | KY | 743 | 0 | 4.064 | 4.064 | 0 | 7.3152 |
| | | RS | WARREN | KY | 961 | 0 | 8.148 | 8.148 | 0.452 | 14.6664 |
| | | RS | WARREN | KY | 1435 | 7.01 | 14.039 | 7.029 | 14.19858 | 0 |
| | | RS | WARREN | KY | 1435 | 0 | 7.025 | 7.025 | 0 | 12.645 |
| | | RS | WARREN | KY | 1749 | 0 | 1.556 | 1.556 | 0 | 2.8008 |
| | | RS | WARREN | KY | 2326 | 0 | 0.919 | 0.919 | 1.85638 | 0 |
| | | RS | WARREN | KY | 2630 | 0 | 3.13 | 3.13 | 6.3226 | 0 |
| | | RS | WARREN | KY | 2631 | 0 | 5.848 | 5.848 | 11.81296 | 0 |