**Special Notes Applicable to Project**

**General Notes & Description of Work**

Instructions:

* These notes have been compiled over the years by HSIP staff and are not set in stone. If the project work is different than what is described below, edit the information as needed. Also, if there are work types/operations that are not included in any of the examples below, please make sure you add an explanation of that particular work type/operation. The “Description of Work” section of this file is essentially a summary (aka the “Cliff Notes”) of what is intended with the project.
* Delete instructions/choices in red
* Delete or modify paragraphs as needed.
* Modify information highlighted in yellow to project-specific information
* Ensure that sheet titles highlighted in green match the actual sheet titles you are using within the proposal. (For example, if the channel lining quantities are on the Pipe Culvert Summary, then change the Channel Lining paragraph below to state that the quantities are shown on the Pipe Culvert Summary as opposed to the Channel Lining Summary.)

Except as specified herein, perform all work in accordance with the Department’s Standard Specifications, Supplemental Specifications, applicable Special Notes and Special Provisions, and applicable Standard and Sepia Drawings, current editions. Section references are to the Standard Specifications.

**CAUTION – PROPOSAL INFORMATION IS APPROXIMATE – PERFORM AN ON-SITE INSPECTION**

Potential bidders are cautioned that the information within this proposal is approximate only and is not to be taken as an exact evaluation of the bid quantities, nor the materials and conditions that may be encountered during construction. As such, before submitting a bid, potential bidders shall make a thorough inspection of the site to examine the conditions to be encountered per Section 102.07. Furthermore, during the execution of the work, the Engineer reserves the right to make changes to the bid item quantities and/or alterations in the work when necessary to complete the project satisfactorily per Section 104.02.

NOTE: The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

Include the BUY AMERICA REQUIREMENT paragraph below ONLY if the D, R, and/or U phase(s) of a project were funded with federal funds, but the C phase is being funded with state funds. If the C phase is being funded with federal funds, then delete the BUY AMERICA REQUIREMENT paragraph.

**BUY AMERICA REQUIREMENT**

**Federal Funds were used on one or more prior phases of this project; therefore, the Contractor shall follow the “Buy America” provisions as required by Title 23 Code of Federal Regulations 635.410.**

**STATIONING**

The contractor is advised that the planned locations of work were established from a beginning station number, which is STA 1107+26.88 at the intersection of KY 11 and KY 15 and corresponds to Milepoint 20.971 along KY 11. NOTE: The existing mile marker signs may not correspond to the proposed work locations.

**LIDAR**

All survey information was obtained from available KYTC Aerial LIDAR data and should be field verified as appropriate during construction and prior to incorporating the various project work items. Refer to the Special Note for Staking concerning staking operations required to control and construct the work.

**Right of Way Limits**

The Department has not established the exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured and environmentally cleared by the Contractor at no additional cost to the Department. In the event that private improvements (i.e., fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

**Control**

Perform all work under the absolute control of the Department of Highways. Obtain the Engineer’s approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved to assure the completion of the Department’s work in general harmony and in a satisfactory manner, and his/her decision shall be final and binding upon the Contractor.

**DESCRIPTION OF WORK SUMMARY**

The following is a summarized description of the primary work operations pertaining to the proposed work. Many of the descriptions below reference where additional information can be found for each work operation.

**Superelevation Improvements.** There are multiple curves where superelevation improvements are being proposed. The intent of this work is to bring a consistent pavement cross slope through the identified curves. Refer to the Superelevation Improvement Summary for locations and approximate quantities. The Superelevation Improvements are set up and quantified for the Contractor to utilize Leveling & Wedging in order to achieve the desired superelevation improvements at the identified location(s). The Superelevation Improvement Summary lists the estimated quantities of Leveling & Wedging for each curve; however, the Engineer will make the final determination as to which Leveling & Wedging mix design will be required at each superelevation improvement area, as well as the appropriate lift thicknesses and number of lifts based on the existing conditions encountered at the time of construction. After the superelevation improvements have been constructed, the entire route will be overlaid with a surface course. (Alternatively, if we decide to NOT resurface the entire route, we should say: After the superelevation improvements have been constructed, the full width of the identified curves will be overlaid with a surface course.) As a result of the superelevation improvements and surfacing operations, the roadside shoulders, fill slopes, and/or ditches will have to be modified to match the final pavement elevations and tie in with the existing ground lines. A quantity of Roadside Regrading has been estimated for regrading the roadside within the identified curves. A representative cross section is given for each curve showing the proposed superelevation improvements and the resulting roadside grading.

NOTE: Some field adjustments of the proposed shoulder width, fill slope, ditch, and/or superelevation improvement may be required. The proposed shoulder and roadside grading is intended to occur within the Right-of-Way (or any work areas the Department has obtained through Consent & Release) and NOT disturb any sensitive obstructions (i.e. fences, buildings, utility poles, etc.). Superelevation improvements that have sensitive obstructions along the roadside shall still require regrading the roadside, but the regraded roadside slopes may have to be constructed steeper than shown on the representative cross section. The desire of the Department is to construct the new fill slopes as flat as possible, with 3:1 generally being the steepest typical slope. However, there may be instances when a regraded roadside slope must be constructed steeper than 3:1 to remain within the Right-of-Way (or Consent & Release work area) and/or not impact a sensitive obstruction. When this situation occurs and the existing fill slope is steeper than 3:1, then the new fill slope can be constructed steeper than 3:1, but the new fill slope shall not be constructed steeper than the existing fill slope. If a desired superelevation improvement will result in the new fill slope having to be graded steeper than the existing fill slope in order remain within the Right-of-Way (or a Consent & Release work area) and/or not impact a sensitive obstruction, then the superelevation rate should be modified (reduced) in order to reduce the final change in pavement edge elevation, thereby reducing the height of the new fill slope grading, and allowing for a flatter new fill slope that will not be steeper than the existing fill slope. Prior to making modifications to the proposed superelevation rate, shoulder width, and/or fill slope, coordinate with and obtain approval from the Engineer.

**Pavement Resurfacing.** The existing roadway is to be resurfaced from Station 10+00 to Station 109+00. Other items that may be associated with the pavement resurfacing include: removal of existing pavement by milling and texturing, construction of edge keys, installation of rumble strips, and application of pavement markings. Refer to the rumble strip Standard Drawings for recommended placement of rumble strips.

**Pavement Resurfacing** (for FD05 resurfacing funds**).** The existing roadway between MP 9.174 – 19.215 is set up to be resurfaced using FD05 resurfacing funds. Other items be associated with the pavement resurfacing include: removal of 1 inch of existing pavement by milling and texturing, leveling & wedging, application of non‐tracking tack coat, and installation of edgeline rumble strips. Refer to the rumble strip Standard Drawings for recommended placement of rumble strips.

**Widening of Paved Shoulder.** Areas have been identified along the route for widening the paved shoulder. Work will include trenching the existing roadside, placing asphalt, and regrading the roadside, as shown on the Typical Sections. Perform this work at the locations identified elsewhere in the Proposal, or the locations as directed by the Engineer. Refer to the Special Note for Shoulder Milling/Trenching for more information.

**Shoulder Repair.** Areas have been identified along the route for Shoulder Repair. The repair locations listed on the Shoulder Repair Summary are approximately only. The Engineer will determine the actual repair locations at the time of construction. Work will include milling/trenching the existing roadside, placing asphalt, and regrading the roadside, as shown and described on the Shoulder Repair Detail. Refer to the Special Note for Shoulder Milling/Trenching for more information.

**Base Failure Repairs.** Areas have been identified along the route for Base Failure Repair. The repair locations and dimensions listed on the Base Failure Repair Summary are approximate only. The Engineer will determine actual repair locations and dimensions at the time of construction. Refer to the Special Note for Base Failure Repair for more details on this item of work.

**Perforated Pipe.** A quantity of \_\_\_ linear feet of Perforated Pipe – 4 in, \_\_\_ linear feet of Non-perforated Pipe – 4 in, and \_\_ Perforated Pipe Headwall Type 1 – 4 in, has been included in the contract for potential use in conjunction with the Base Failure Repairs and/or potential use in other areas as directed by the Engineer. The Contractor and Engineer should work together to determine any locations throughout the project requiring perforated pipe. The Engineer will make the final determination as to the quantities and placement of Perforated Pipe and associated bid items.

**Shoulder Widening.** Areas have been identified along the route for shoulder improvements. Work will include the placement of a one foot width of crushed stone base shoulder (with one foot of depth) outside of the edge of pavement with a 3:1 traversable side slope. Other items that may be associated with the shoulder widening include: placement of geotextile fabric, pipe extensions with headwalls, tree removal, and a Double Asphalt Seal Coat. See the Special Note for Double Asphalt Seal Coat for more information on the asphalt seal coat.

It is anticipated that additional earthwork (over and above the Roadway Excavation quantity) will be required to bring the proposed side slopes to the grades shown on the Plans at the specified locations. This item will be bid as Embankment-In-Place. An estimate of these anticipated quantities is included in the Proposal. The Engineer will make the final determination as to the quantities required to complete the work based on the existing conditions encountered during construction.

As shown on the Cross Sections, some of the side slopes to be constructed with the proposed typical section (for both the **Shoulder Widening** and **Guardrail Replacement**) will extend beyond the existing right of way line. An attempt has been made to obtain Consent & Release approval from these adjoining property owners to allow this work to be completed on these properties. However, to date, only a portion of the owners have granted approval for the work. The Contractor should note that the total estimated quantities included in this proposal, upon which the Contractor should base his bid, are for those areas that (1) either Consent & Release has been obtained or (2) it is anticipated that the work can be completed within the existing right of way with only a slight variation to the typical section (as directed by the Engineer). Those shoulder improvement and guardrail replacement areas highlighted in “light red” on the quantity summaries are NOT included in the total estimated quantities. The attempt to obtain Consent & Release approval is continuing and additional supplemental work areas may be added to the project.

(In the above example for **Shoulder Widening**, the existing route had virtually NO shoulder and at times, moderately steep side slopes. To achieve a 1 foot shoulder we added Crushed Stone Base, as noted. This may not be a common way to add shoulder width, but is a good example of getting shoulder width when the existing conditions are not very conducive. Shoulder Widening could also be made by Trenching & Paving, assuming there is some width of existing earth shoulder to trench. The most likely way our RD Corridors will obtain additional shoulder width will be by simply adding additional earth shoulder. When we are proposing additional earth shoulder width, the notes below about Roadside Regrading are the more appropriate notes/language to use.)

For Roadside Regrading, ensure the bulleted list below matches the proposal documents. (For example, the list below states that the shoulder width is shown on the Typical Sections. Ensure that the Typical Sections include the shoulder width.)

**Roadside Regrading.** Areas have been identified along the route for Roadside Regrading. The overall intent of the Roadside Regrading work operation is to improve the existing roadside by constructing a proposed width of earth shoulder and regrading the roadside fill slopes, ditch foreslopes, and/or ditch backslopes as flat as possible within the Right-of-Way (or any work areas the Department has obtained through Consent & Release), while NOT disturbing any sensitive obstructions (i.e. fences, buildings, utilities, etc.). A variety of information is included in the proposal to communicate the proposed Roadside Regrading.

* The Special Note for Roadside Regrading provides information on:
  + The required materials and construction methods.
  + How roadside regrading is measured and paid.
* The ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS includes:
  + 11 different Figures that show the common conditions and situations that may be encountered when performing Roadside Regrading.
  + Notes that provide guidance on how to adjust the proposed shoulder and/or roadside dimensions so that Roadside Regrading work operations will remain within the Right-of-Way (or Consent & Release work area) and/or not impact a sensitive obstruction.
* The Typical Section(s) show:
  + The desired dimensions of the proposed shoulder, ditch, and/or roadside slopes.
  + NOTE: There may situations where the desired shoulder, ditch, and/or roadside dimensions must be modified based on existing site conditions. When situations arise where the desired roadside dimensions need to be adjusted, the Contractor and Engineer should work together to determine the final dimensions for the proposed shoulder, ditch, and/or roadside slopes. The notes within the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS provide guidance on ways to adjust the Roadside Regrading when common site conditions and constraints are encountered.
* The Roadside Regrading Summary:
  + Lists the locations where Roadside Regrading is to be performed. While the Department anticipates the limits of Roadside Regrading shown on the Roadside Regrading Summary are accurate, it is always possible the condition of the existing shoulders and existing ditches could change between the Design phase and Construction phase of the project. Therefore, the Contractor and the Engineer are to work together to review the limits of Roadside Regrading and make alterations per Section 104.02.
  + Lists estimated volumes of excavation and embankment for each Roadside Regrading location to help indicate the approximate level of effort of each Roadside Regrading location. **NOTE: Roadside Regrading will not be measured in the field at the time of construction but will be measured as the proposed quantities of Embankment in Place AND/OR Roadway Excavation, increased or decreased by authorized adjustments in accordance with 204.04.02.**
  + Indicates which Figure reference within the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS is the closest representation of each proposed Roadside Regrading location.
  + Lists the Targeted Fill Slope (or Ditch Foreslope) and, if applicable, the Targeted Backslope for each Roadside Regrading location.
  + Indicates if there is a need for Embankment Benching, a DGA Wedge, and Channel Lining for each Roadside Regrading location.
  + If applicable, lists the estimated quantities of DGA, Asphalt Seal Coat, Asphalt Seal Aggregate, Channel Lining, and Geotextile Fabric for each Roadside Regrading location.
  + Summarizes the quantities of the bid items associated with the Roadside Regrading work operation.
* If the project does NOT have any Consent & Release areas for the purpose of Roadside Regrading, the following language can be deleted. If the project DOES have one or more Consent & Release areas for the purpose of Roadside Regrading, then this language needs to remain: The Consent & Release Summary provides:
  + A listing of the locations in which the Department has obtained a Consent & Release from the adjacent property owner.
  + A description of the work that is to occur within the Consent & Release work area.

**DGA Wedge & Chip Seal.** All sections of “Roadside Regrading” are set up to receive a DGA Wedge & Chip Seal after the roadside regrading operations are complete. The proposed DGA Wedge dimensions are detailed on the Typical Sections. Refer to the Special Note for Roadside Regrading and the Special Note for Double Asphalt Seal Coat for more information on the DGA Wedge & Chip Seal. Alternatively, if we decide to be selective with the DGA Wedge & Chip Seal, use language along the lines of: Some sections of “Roadside Regrading” are set up to receive a DGA Wedge & Chip Seal after the roadside regrading operations are complete. Other areas of “Roadside Regrading” are NOT to receive the DGA Wedge & Chip Seal. Construct the DGA Wedge & Chip Seal at the locations identified on the Roadside Regrading Summary, or at locations as directed by the Engineer. The proposed DGA Wedge dimensions are detailed on the Typical Sections. Refer to the Special Note for Roadside Regrading and the Special Note for Double Asphalt Seal Coat for more information on the DGA Wedge & Chip Seal.

**Entrance Pipe Replacement & Driveway Surfacing.** Due to areas of existing ditch line being re-shaped and relocated further from the edge of pavement, there are areas throughout the project where the existing entrance pipe will have to be removed and replaced to line up with the new ditch line. Refer to the Entrance Detail within the Typical Sections for details on this work item. See the Entrance Pipe Summary for the locations and bid items/quantities associated with the entrance pipe replacements. The existing driveway surface is noted on the summary sheet and is to be replaced with like-kind surfacing. The Engineer will make the final determination as to the locations and quantities required to complete the work based on the existing conditions encountered during construction. Refer to the Special Note for Pipe Replacements / Extensions for more information on this item of work.

**Pipe Replacements & Extensions.** There are locations throughout the project where culvert pipes are being extended or replaced. Locations and estimated quantities are noted on the Culvert Pipe Replacement & Extension Summary. For pipe extensions where the existing pipe is RCP, remove the existing headwall and first section of existing RCP attached to the headwall (approx. 3 to 4 ft of existing pipe). Other items that may be included with the pipe extensions/replacements include culvert headwalls, sloped & mitered concrete headwalls, intermediate anchor/collar, roadside regrading, ditching, channel lining, erosion control blanket, asphalt pavement quantities, etc. Refer to the Special Note for Pipe Replacements/Extensions for more information on this item of work.

**Sloped & Mitered Concrete Headwalls.** Sloped & Mitered Concrete Headwalls shall be constructed as shown on the detail sheets titled: Sloped & Mitered Concrete Headwall Details. This headwall is intended to combine the benefits of a pipe headwall with the advantages of safety and adaptability by allowing the headwall to be custom fit to the surrounding embankment. The Culvert Pipe Replacement & Extension Summary identifies which pipe ends are to receive the Sloped & Mitered Concrete Headwalls. The identified pipe ends shall have the headwall installed and the pipe mitered at a slope that matches the final embankment slopes at each location. If the pipe is on a skew, install the headwall and miter the pipe so that the concrete slope paving of the new headwall is perpendicular to the roadway. In other words, the embankment slope should not be warped to fit the skew of the pipe; the headwall should be installed and the pipe should be mitered to match the final embankment slope, so that the roadside fill slope is fairly consistent prior to the pipe, at the pipe, and beyond the pipe, and does not create an excessive bulge in the embankment. When completed the edges of the Sloped & Mitered Concrete Headwall should be flush with the surrounding ground line. Payment at the Contract unit price Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary to install the headwall and miter the pipe.

NOTE: For pipes that receive the Sloped & Mitered Concrete Headwall, the pipe length will be measured to the furthest point along the mitered end of the pipe.

**Intermediate Anchor/Collar.** There are quantities of Class A Concrete included in the contract to construct an intermediate anchor, or collar, around the pipes at the pipe extension locations. This is so the new pipe can be securely connected to the existing pipe. The intermediate anchors shall be constructed as shown on Standard Drawing RDX-060, current edition.

**Channel Lining.** A quantity of \_\_\_ Tons of Channel Lining Class II has been included in the Channel Lining Summary for use at the locations indicated on the summary. An additional \_\_\_ Tons of Channel Lining Class II has been included in the contract for potential use around drop box inlets, safety box inlets, inlets and outlets of pipes, along areas of regraded ditch line and/or fill slope, and other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Channel Lining throughout this project. The Engineer will make the final determination as to the needed quantities and placement of Channel Lining.

**Erosion Control Blanket.** A quantity of \_\_\_ square yards of Erosion Control Blanket has been included in the contract for potential use along areas of regraded shoulders, ditch lines, fills slopes and/or back slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Erosion Control Blanket throughout this project. The Engineer will make the final determination as to the quantities and placement of Erosion Control Blanket.

**Guardrail**. Several locations within the project are set up for guardrail replacement. The approximate locations and estimated quantities are noted on the Guardrail Summary. Refer to the Special Note for Guardrail, Typical Sections, and Plan Sheets for more detail and information on this item of work.

**NOTE:** When the plans call for a Type 1 or Type 4A End Treatment, a MASH eligibility letter from FHWA is required for these end terminals. When a MASH tested eligibility letter is not available for the end terminal being utilized, the most recent NCHRP 350 eligibility letter from FHWA for that terminal will apply. Acceptance of the terminal will be at the discretion of the Engineer.

**Bridge Rail Modification using Case I, I-A, I-B, or II Bridge Guardrail.** There are quantities of Bridge Guardrail Case \_ included in the contract for modifying the barrier system at the structures identified on the Guardrail Summary. For more information on this item of work, refer to the Special Note for Guardrail and the detail sheet titled: Guardrail on Bridge, Case \_.

(Most of the time when we are attaching guardrail to an existing bridge parapet wall or existing box culvert headwall, we will use one of the above **Bridge Rail Modification Cases**. In those situations, we’ll only need the above language. Occasionally, we may want a much more robust bridge guardrail design. In those situations, we’ll want to develop a detail for attaching Thrie Beam Guardrail to the bridge and then we’ll want to use the below **Bridge Rail Modification using Thrie Beam Guardrail** language. Very, very rarely would we ever have regular Bridge Rail Guardrail and Bridge Rail Thrie Beam Guardrail.)

**Bridge Rail Modification using Thrie Beam Guardrail.** There are quantities of Thrie Beam Guardrail included in the contract for modifying the barrier system at the structures identified elsewhere in the Proposal. For more information on this item of work, refer to the Special Note for Guardrail and the Thrie Beam Guardrail details.

**Drilled Railroad Rails and Cribbing.** There are locations within the project where embankment slide repairs using drilled railroad rails and cribbing is proposed. Locations are noted on the Drilled Railroad Rails and Cribbing Summary. Refer to the Special Note for Embankment Slide Repair and the associated detail sheets for more information.

**Reinforced Concrete Box Culvert Extensions.** There are several locations within the project where existing reinforced concrete box culverts are being extended. Locations and estimated quantities are noted on the RCBC Extensions Summary. Refer to the Structure Plans, Special Note for Box Culvert Extensions, and Traffic Control Plan for more details and information on this item of work.

**Removal of Existing Signing Assemblies and Installation of Proposed Signing.** A quantity of \_\_ each of “Remove Sign” has been included for removal of existing signs along the corridor, as identified in the Remove Sign Summary. (If you do not develop a Remove Sign Summary, then you could simply write: as identified in the Proposal, or: as identified on the Signing Plans. This also means that even if you don’t have a Remove Sign Summary, at a minimum we need to indicates on the plans which signs are to be removed). An estimated quantity of new signing and sign post is included on the Signing Summary. The Contractor and Engineer will work with the District Traffic Section to determine the final signing layout and sign types prior to installation of the proposed signing. Refer to the Special Note for Signing and the Special Note for Signage for more details concerning the procedures for determining and staking the final layout and installation of the signing.

**Remove, Store & Reinstall Signs.** A quantity of \_\_ each of “Remove-Store and Reinstall Sign” has been included in the contract for existing sheet signs that may obstruct or interfere with proposed construction activities. (A good example of when we might need to use this bid item is when we have Roadside Regrading that will “wipe out” an existing sign if we do not “remove, store & reinstall” the existing sign. Of course, if we are planning to replace the existing sign anyway, then we wouldn’t need to “remove, store & reinstall” such a sign…this bid item is only for existing signs to be left in place but the sign will interfere with other proposed work.) Do not remove an existing sign until just prior to working in the vicinity of the sign. Reinstall the sign as soon as possible once the construction activities in the vicinity of the sign has reached a stage that the sign will no longer be an obstruction or interfere with the work. The intent is for the sign to be “down” the minimum length of time necessary.

(The above example for **Remove, Store & Reinstall Sings** has been our “basic” language that describes that there may be some existing signs that need to be removed, stored, and reinstalled along the route to allow for construction of certain work operations. When we have a Signing Corridor project where we are removing and replacing A LOT of curve warning signs, the below **Removal of Existing Signs** might be appropriate language to include in the Description of Work.)

**Removal of Existing Signs.** Estimated quantities of “Remove Sign” are included within the Remove Sign Summary. This bid item is for the removal of ALL the existing horizontal alignment warning signs along the identified routes. Further, the District Traffic Engineer may determine that there are other sheet signs, in addition to the existing horizontal alignment signs, that also need to be removed. These signs will be determined during construction.

**NOTE:** There are some curves along the routes within this contract that have existing horizontal alignment signs that will not receive proposed horizontal alignment signs. For these curves the existing horizontal alignment signs are to be removed during the same time period as the installation of the proposed horizontal alignment signs for the route. The reason these horizontal alignment signs are being removed and NOT replaced with proposed horizontal alignment signs, is because those particular curves do not “ball bank” below the posted speed limit, and therefore, those curves do not require horizontal alignment signs. The Engineer may consult with the District Traffic Engineer and/or the HSIP staff within the Division of Traffic Operations for more information, if necessary.

**Trim & Remove Trees, Stumps, and Brush.** There are locations within the project where Trees, Stumps, or Brush are to be removed and/or trimmed. Locations are noted on the Tree Removal & Trimming Summary. Refer to the Special Note for Tree, Stump, and Brush Removal for more information.

**High Friction Surface Treatment.** There are locations within the project where High Friction Surface Treatment is to be installed. Locations are noted on the High Friction Surface Summary. Refer to the Special Note for Polymer Concrete Overlay Systems and the Special Note for Striping on High Friction Surface for more information on this item of work.

**Thermo Rumble Strips Type 2.** A quantity of \_\_\_ linear feet of Thermo Rumble Strips Type 2 has been included in the contract for construction of transverse, raised thermoplastic rumble strips at the approximate locations identified elsewhere in the proposal. The Engineer shall determine the exact locations of each thermo rumble strip unit at the time of construction. Construct the Thermoplastic Rumble Strips Type 2 according to the detail sheet. The Department will measure each unit of eight strips and 2 flexible delineators as the width of the unit perpendicular to the centerline of the roadway. Payment at the contract unit price per linear foot shall be considered full compensation for all labor, materials, equipment, and incidentals for one complete installation consisting of eight transverse thermo strips and 2 flexible delineators.

**Temporary Striping.** A quantity of \_\_\_ linear feet of Pave Striping – Temp Paint – 4 in has been included in the contract for potential use in the area of the Curve Correction between MP 21.440 – 21.599, the Superelevation Improvement areas, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine any locations throughout the project requiring temporary pavement striping. The Engineer will make the final determination as to the quantities and placement of temporary pavement striping.

**Permanent 6” Striping.** A quantity of Pave Striping – Perm Paint – 6 in has been included in the contract to restripe the entire corridor with 6” permanent paint.

**Bridge Widening.** The bridge over Lick Skillet Creek is being widened by replacing the superstructure and widening the substructure on the south side. Separate structure drawings for this work are included in the Proposal. A quantity of DGA and Asphalt Base is included to properly align the roadway approaches to complete the bridge widening. Relocation of a waterline per Louisville Water Company specifications is required as part of this work. A PDF copy of the LWC Technical Specifications and Standard Drawings may be obtained from the LWC - Director of Engineering (502-569-3600).

**Retaining Wall.** A large-block retaining wall will be installed to provide a slope failure improvement along Cox Creek near Station 370+00. The work includes removal of the existing stacked stone wall (see Special Note regarding disposition of existing stone materials), installation of retaining wall, and replacement of existing asphalt pavement. The removal and replacement of the existing guardrail at this location will be covered by the **Guardrail Replacement** work item noted above.

**Install Qwick Kurb Model L125 Big Bollard System.** A lane separator curb is to be added along the existing double yellow line of US 31W on the northern leg of the US 31W (MP 15.769)/KY 1136 intersection. This work will include placement of lane separator curb, the removal and installation of inlaid pavement markers, and the application of pavement markings.

**Intersection Conflict Warning System (ICWS)**. Installation of an Intersection Conflict Warning System is proposed at the intersection of US 31W and KY 240. Refer to the ICWS plan sheets for details and notes describing this item of work.

**Permanent Traffic Data Acquisition Stations.** Installation of Permanent Traffic Data Acquisition Stations is proposed at one or more locations in the proposal. Refer to the plan sheets and Material, Installation, and Bid Item Notes for Permanent Traffic Data Acquisition Stations, and plan sheets for details and notes describing this work.

**Mini-Roundabout.** This example is from 9-9009.01, let in 2020. Adjust the note to suit the site-specific conditions [Cave Run Lake - Google Maps](https://www.google.com/maps/place/Cave+Run+Lake/@38.1402964,-83.5489365,905m/data=!3m1!1e3!4m6!3m5!1s0x884471b9d74eed8d:0x4261413ff456d231!8m2!3d38.0649532!4d-83.4830247!16zL20vMDcwaHRn?entry=ttu&g_ep=EgoyMDI1MDQwOC4wIKXMDSoASAFQAw%3D%3D). The existing 4-way stop at the intersection of US 60 and KY 801 will be reconstructed into a Mini-Roundabout. Refer to the Special Notes for Completion Date & Liquidated Damages for duration restrictions on this effort. Work will include shoulder milling/trenching for pavement widening, constructing flume inlets and channel lining for drainage, roadside grading, asphalt milling & texturing for pavement regrading, surface paving and marking, installing signage, and the installation of lighting equipment. All intersection approaches have a mountable splitter island and a pair of drainage flumes. The central island is also to be mountable. All islands are to be monolithic. All islands and the truck aprons are to be formed using dyed (Baja Red, 2-bag, RG-2827R Interstar) concrete. The tops of all islands and truck aprons are to be stamped with a stone pattern or comparable options to be provided by Contractor to Engineer for approval. The Detail Sheets included in this proposal include location and elevation information throughout the Mini-Roundabout footprint. Achieving the proposed grades is to involve asphalt milling & texturing and constructing lifts of asphalt base. A 1.50” thick layer of asphalt surface is to top the paved footprint bringing the intersection to final grade. Construction of the asphalt surface will require an edge key on each approach.

District 4 used this description for colored concrete: Roundabout approach islands shall be stamped in a brick pattern and colored medium brownish shad of red (Baja Red/Chestnut). Stamp and color shall be incidental to concrete sidewalk – 4 inch.