**FY2021 Contract Leveling Course Guidelines**

This guidance is to supplement the EPG 402 requirements.

* **DOCUMENATION AND SAFETY:** For CLC projects, no conceptual report is required; however the core team should audit the corridor for safety deficiencies and document the findings. Isolated deficiencies that present an immediate threat potential should be remedied, either by the project or by maintenance forces. Guardrail should be addressed in accordance with the Guardrail Policy for both major and minor roads. If new guardrail is installed, MGS rail and MASH compliant ends are to be used. The remaining deficiencies may be deferred to be completed with in-house forces or included in a programmed future project. These remaining deficiencies must be documented; however a design exception is not required. The documentation must be sufficient to demonstrate reasonable diligence on the part of the core team in upholding the system wide focus on safety.
* **PEDESTRIAN FACILITIES**: Pedestrian facilities are to be addressed in accordance with the Districts Transition Plan and applicable MoDOT policies. Complete the Bike/Pedestrian/VE/RR page in SIMS for all projects. Required adjustments to pedestrian facilities should be performed prior to or with the project.
* **SEED FILES:** Plan templates are located in ProjectWise in the design seed folders:

CLC Template plan sheets:

CLC\_01\_Title\_2021

CLC\_02\_Typical\_2021

CLC\_03\_Quantities\_2021

CLC\_04\_Transitions\_2021

CLC\_05\_Traffic\_Control\_1\_2021

CLC\_06\_Traffic\_Control\_2\_2021

CLC\_06\_Traffic\_Control\_2\_Rumbles\_2021

CLC\_07\_Traffic\_Control\_3\_2021

CLC\_08\_Traffic\_Control\_4\_2021

CLC\_09\_Traffic\_Control\_5\_2021

The ADT of the routes should be listed in the left top corner of the Title sheet. This information is used by the Project Reviewer to set the liquidated damages and is also beneficial to the contractor to be aware of the amount of traffic on the route.

**ENTRANCES:** The entrance transition template is an example of how entrance details can be handled. Districts may address entrance transitions appropriately for the location, traffic volume or other mitigating circumstance, however practical applications are strongly encouraged.

* **IRREGULARITIES:** Include an appropriate amount of additional asphalt to account for surface irregularities. Irregularities can be estimated in various ways including field measurements of the pavement width, ruts and entrances dimensions, ARAN data, input from district construction staff and by consulting with the pavement team.
* **SURFACE PREPARATION:** The appropriate surface preparation should be discussed in detail by the core team. District Maintenance should patch all minor surface defects, potholes, centerline joint deterioration, and edge-line distortions prior to contractor operations. If Maintenance cannot perform surface preparations, pavement repair quantities should be identified in conjunction with Construction and added to contact in accordance with Sec 613. Class C partial depth asphalt pavement repair quantities should be included in the contract to address severely deteriorated surface defects and distortions. Class C asphalt repair may require quantities of aggregate base replacement at structurally failed sections with visible signs of subgrade failures.
* **STRIPING: Striping is preferred to be included in the contract when the project is federally funded.** The district will need to add striping log miles and quantities to the Summary of Quantity sheets. If contract striping is not included, the contract must include payment for TRPM’s and the district will need to coordinate with striping crews to have the permanent stripe down within 14 days after paving. For routes that are to be striped by MoDOT, the pavement marking quantities need to be removed from Summary of Quantities Sheet 1 of 1, remove Traffic Control Sheet 5 of 5, and any route that currently has an edgeline, the project will need to include quantities for Temporary Pavement Marking for edgeline in addition to the centerline marking. When performing this work on major routes, plan sheets and pay items must be adjusted to accommodate the required 6 inch stripes.

The district shall verify that the existing passing zones are correct. All incorrect zones shall be corrected in the log miles on Summary of Quantity sheets. The striping log mile sheets are preferred to be submitted with the PS&E documents.

* **INTERSECTIONS AND LEFT TURN LANES:** Projects that do not include contractor striping may include all pavement marking normally made with durable intersection pavement marking to be performed by the contractor. If not included in the contract, the District must address these items with temporary pavement marking in the contract or by the use of District forces.
* **TRANSITIONS – Entrance and side road:** Transitions may be constructed by coldmilling or by tapering the overlay to zero (theoretical) thickness. The district will need to review their routes and determine the appropriate approach for each location within their project.
* **TRANSITIONS – Begin/End of Project and Exceptions:** Generally transitions should be constructed by coldmilling a taper of 1” to 25’ and placing the overlay at the intended thickness (Butt Joint). As some flexibility exists, the District will need to review the route and any exceptions to determine the appropriate adjustments for each location within their project.
* **BITUMINOUS CENTERLINE RUMBLE STRIPS:** New rumbles are not generally included in CLC projects, however Centerline Rumble Strips may be considered for locations that have experienced a significant cross-centerline accident history. Districts shall consult their pavement engineer when including new rumbles in CLC projects. Rumbles must be either fog sealed, slurry sealed or rejuvenating sealed prior to striping. When routes with existing rumbles are resurfaced under these guidelines, rumbles are to be replaced when impacted. When possible, consideration should be given to relocating joints in the asphalt to a location outside of the rumble location.
* **TRAFFIC CONTROL PLANS:** Pilot car shall be used on all projects constructed under traffic. Consideration should be given to use additional flaggers at heavily traveled side roads and entrances. If chosen, the locations shall be specified in the JSP ADDITIONAL FLAGGERS. Districts may consider road closures when appropriate. For flagging operations, use NJSP-17-03A, Flagging Procedure for Two-Lane Roadways (3-2-1 Cone Procedure). Districts should consider using Temporary Short-Term Rumble Strips JSP; plan sheets and pay items need to be included.
* **SHOULDER DROP OFF:** District Maintenance should address any minor shoulder drop off issues prior to contractor operations. If Maintenance cannot address the shoulder drop off, shaping slope quantities should be included in the contract in accordance with Sec 215. Upon completion of the project, District maintenance forces shall address the addition of shoulder material along the SAFETY EDGE.
* **BID ITEMS:** - Add additional bid items as needed.

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| ***CONTRACTOR STRIPING***  |
| **Item No.** | **Description** |
| **4020520** | **Bituminous Pavement Mixture PG64-22 (Surface Leveling)** |
| **4071005** | **Tack Coat** |
| **6123000A** | **Truck or Trailer Mounted Attenuator (TMA)** |
| **6161005** | **Construction Signs** |
| **6161009** | **Flag Assemblies** |
| **6161025** | **Channelizers (Trim Line)** |
| **6181000** | **Mobilization** |
| **6206000C** | **4 In White Standard Waterborne Pavement Marking Paint** |
| **6206001C** | **4 In. Yellow Standard Waterborne Pavement Marking Paint** |
| **6224010** | **Modified Cold Milling (Depth Transitions)** |

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* **QUALITY CONTROL FOR PLANT MIX BITUMINOUS SURFACE LEVELING:** This JSP is required on all projects. Any concerns with the use of this JSP should be discussed with your Construction and Materials Division representative.
* **CONTRACT LIQUIDATED DAMAGES:** This JSP will be required on all contracts to specify the contract time and liquidated damages. The JSP can be set up with both calendar days and an overall completion date to allow the contractor the flexibility to work the project into their schedule, but restricts the contractor to the number of days once the contract work is started. The general rule of thumb is that there is two (2) calendar days for every one (1) working day with a minimum of 30 calendar days unless the district has justification for a tighter time frame due to impacts to the traveling public. Your Construction and Materials Divisions representative should be consulted prior to use of the Liquidated Damages for Winter Months JSP (JSP-04-17A).

**COMPLETION DATE:** November 1, 2021 (let before March 31, 2021)

 November 1, 2022 (let after March 31, 2021)

For projects with a 2022 completion date, the Winter Months Requirements JSP (JSP-15-07A) must be included. Additionally, the RE will be responsible to advise maintenance staff of the contractor proposed completion date in order to address any impacts to maintenance activities performed in effort to prepare the route for the contract treatment.

* **BRIDGE EXCEPTIONS:** Bridges should be excepted unless prior written approval is obtained from the Bridge Division and submitted with the transmittal package. Guardrail placed at bridge ends and box culverts may need to be replaced, review EPG Section 606.1 Guardrail for replacement guidance. When replacing guardrail at existing bridge end connections that do not conform to the current standards, they should be considered for replacement or modification, consult the Bridge Division Liaison Engineer.
* **RAILROAD EXCEPTIONS:** Railroads should be excepted unless prior written approval is obtained from the Multimodal Operations Division and submitted with the transmittal package.
* **PAVING EXCEPTIONS:** Examine the pavement IRI and surface condition. Consider an exception if they are deemed acceptable.
* **PROJECT ESTIMATES:** The unit bid price should be obtained using the most recent history available from Bid Tabs Pro for each project location. If you have a large project or uncertainty regarding a unit price to use, please contact Patrick Hake (573) 526-2919.