

**Roadway and Erosion Control**

**Item 209 – Linear Grading, As Per Plan**

This item of work shall consist of grading along the outside edge of the paved shoulder to eliminate high spots and provide positive sheet flow off the pavement and shoulder into roadside ditches or drainage structures. This item is not intended to be used to excavate a uniform depth to place Item 617 – Compacted Aggregate, As Per Plan.

Any debris collected shall be removed and disposed of as specified in Section 105.16 & 105.17 of the Construction and Material Specifications.

Payment for the above work shall be made at the unit bid price for Item 209, Station, Linear Grading, As Per Plan and shall include all labor, tools, equipment and materials necessary to perform this item of work.

The following estimated quantities have been carried to the General Summary.

Item 209 – Linear Grading, As Per Plan ..... **6.27 MI**

**Castings Adjusted to Grade, As Per Plan**

All castings, within the asphalt overlay section, shall be adjusted to the finished roadway elevation by the Contractor. The time between adjusting the castings and resurfacing shall be kept to an absolute minimum. No adjusting rings shall be permitted.

The following estimated quantities have been carried to the General Summary.

Item 623 – Monument Box Adjusted to Grade, As Per Plan ..... **3 Each**

**Pavement**

**Profile and Alignment**

Place the proposed pavement to follow the alignment of the existing pavement. Previous construction plans showing the original alignment are available for inspection at the ODOT District 12 office. Place the proposed asphalt concrete as shown on the typical sections. The intent of the plans is to maintain the existing profile.

**Planing Requirements**

The duration of time between planing the asphalt and placing the surface course shall be kept to a minimum. In no instance shall this time exceed 10 calendar days. The time limit shall begin on the first day of planing, and shall continue based on calendar days, minus any bad weather days, until completion of the asphalt concrete surface course. This is to ensure that the potential degradation of the exposed pavement due to traffic is kept to a minimum.

In the event that the time between exposing the existing pavement and placing the asphalt surface course exceeds 10 calendar days, liquidated damages as per 108.07 of the C&MS shall be assessed.

**Asphalt Concrete Surface Course Sealing Requirements**

In addition to the gutter sealing requirements specified on SCD BP-3.1 and in CMS 401.15, after completion of the surface course, the Contractor shall use a certified 702.01 PG binder to seal the following locations:

- All castings, including but not limited to: monuments, manholes, water valves, catch basins, curb inlets.
- Butt joints and feather joints including bridge approaches.
- Forward joint for driveway asphalt and trailing joint when butting to existing asphalt drive.
- Perimeter of all pavement repairs or other asphalt inlays when pavement repairs/inlays are not overlaid with an asphalt concrete surface course.
- All cold longitudinal joints between paved shoulders and guardrail asphalt.

The width of the sealer shall be 2 to 3 inches.

Any additional costs associated with the work identified in this note shall be included in the appropriate asphalt concrete surface course item of work.

**Item 251 – Partial Depth Pavement Repair (441), As per Plan**

This item shall be used to repair unsound, cold patch, or pop-out areas of longitudinal and transverse joints as directed by the Engineer. This work shall be performed prior to the planing operation. The depth of the repair shall be 3” below the top of the existing asphalt surface. The width of the repair shall be 12” centered over the existing joint.

Use replacement materials conforming to the requirements of Item 441, Type 2.

The following estimated quantity has been carried to the General Summary:

Item 251 – Partial Depth Pavement Repair..... **1,000 SY**

**Item 617 – Compacted Aggregate, As Per Plan**

This item is a contingency that shall be used as directed by the Engineer to fill any remaining low areas after Item 209 – Linear Grading, As Per Plan, has been completed. Material shall be limited to reclaimed asphalt concrete pavement.

The actual depth used will vary depending upon existing conditions. For estimating purposes, an average depth of one inch (1.0”) at one foot width will be used. Water, if needed, shall be applied as per 617.05 and included for payment under Item 617 – Compacted Aggregate, As Per Plan.

**Item 618 – Center Line, Rumble Stripe (Asphalt Concrete)**

The following estimated quantity has been carried to the General Summary:

Item 618 – Center Line, Rumble Stripe (Asphalt Concrete) ..... **1.75 Miles**

**Item 253 – Pavement Repair**

This work item is for use as directed by the Engineer for the purpose of pavement repair. All labor and material necessary to perform this work and section 250 of the CMS shall be included for payment under Item 253.

Depth of pavement repair removal shall typically be 5” measured after the pavement has been planed. The depth of repair shall be as directed by the Engineer if unsound material is encountered after the removal of the 5”.

Use replacement materials conforming to the requirements of Item 301.

The following item has been carried to the General Summary for use as directed by the Engineer:

Item 253 – Pavement Repair..... **900 CY**

**Item 254 – Pavement Planing, Asphalt Concrete, As Per Plan**

This item shall be used to remove the existing asphalt overlay full width at an average depth of 1-1/2” as specified in the plans. Areas which have transverse wedges (butt joints) are to be removed in two passes as required for maintaining traffic. No additional payment shall be made for the second pass.



DESIGN AGENCY



DESIGNER  
JDA

REVIEWER  
EJK 10-08-20

PROJECT ID  
99628

SHEET TOTAL  
5 | 22

**Item 441 – Asphalt Concrete Surface Course, Type 1, (446), As Per Plan**

The coarse virgin aggregate shall consist of a blend of 60% min. air cooled blast furnace slag (ACBFS) or Trap Rock from Ontario with limestone comprising the remaining percentage.

Use a PG 70-22M binder for this item.

Follow 401 and 441, except as follows:

- Offset the AC gauge for each JMF for the project prior to the project's start using 441.09.A. and the MODIFIED Supplement 1043 procedure below.
- During S-1043.07 process, a RAP sample obtained from the JMF-designated RAP pile will be extracted in the Asphalt Level 3 lab to verify the RAP AC %. The RAP AC % will be within 0.3% of the average RAP AC % from the JMF. If RAP AC % is outside of the 0.3%, the verification pan process will stop, and District Testing will allow one opportunity to rework the RAP pile at the mix plant and resample. Resampling requires District Testing to be present. If the resample is still outside of the 0.3%, the JMF will be rescinded and need to be redesigned.

Follow 441.10 except as follows:

- Ensure asphalt binder content does not exceed Table 441.10-1. Adjustments to mix plant control settings must be submitted to and approved by District Testing prior to making the adjustment. The adjustment cannot exceed +/- 0.2% from Design AC % from JMF. Do not lower virgin binder content or increase RAP percent. Ensure plant ticket shows the adjustment and is set to the adjusted total AC % at all times afterwards.

Follow Supplement 1043 for AC Gauge offset, except as modified below:

- Follow 1043.07 except as followed:
  - Notify District Testing a minimum of one week prior to making verification pans.
  - District Testing will witness a solvent extraction from a sample from the RAP pile that is to be used in the JMF to verify the RAP AC %. RAP AC % will be within 0.3% of RAP AC % determined in JMF. If outside of 0.3%, do not proceed and the JMF will need to be redesigned.
  - District Testing will witness the verification pans being blended, mixed, and compacted.
  - Make a minimum of three verification pans for the JMF that are at the JMF asphalt binder content. Make one additional verification pan for each additional district the JMF will be used in.
  - In addition, turn possession over of the calibration AC gauge pans used to determine the fit coefficient to District Testing.

- For AC content pay acceptance, replace 1043.08 with the following:

Calculate an AC gauge offset amount for each JMF and mix plant in accordance with the following procedure prior to start of any production for the JMF. Notify District Testing 24 hours prior to offsetting gauge.

1. Ensure printer is on and place the first verification pan in the AC gauge and run.
2. After the 16-minute test, take the verification pan out and turn 180 degrees and place back in AC gauge and run.
3. Repeat Steps 1 and 2 with second and third verification pans.
4. For each run, take the JMF asphalt binder content minus the AC gauge AC % to obtain the offset for that run.
5. Average all offsets for a final offset.
6. Retain all of the verification pans. After the final offset is determined, District Testing will choose two of the verification pans and send one of these two to OMM to extract and reflux.

**Item 441 – Asphalt Concrete Surface Course, Type 1, (446), As Per Plan (Cont.)**

7. District Testing will use the two verification pans to offset their AC gauge. Before the beginning of a production day, run the verification pan in the AC gauge and ensure the offset AC gauge amount is within 0.14% of the JMF asphalt binder content. During the start of production for the JMF, solvent extract the first two QC samples and compare to the offset AC gauge. Ensure solvent extraction is within 0.3% of offset AC gauge. If more than 0.3% off, immediately resample and run AC gauge and solvent extract immediately. If two consecutive samples are more than 0.3% off, immediately stop production, contact monitoring team, and investigate the reason for the problem. Once two consecutive QC samples are within 0.3% of offset AC gauge, the final offset gauge is confirmed. After confirming the AC Gauge offset amount proceed with determining AC contents of production samples by the AC gauge according to 1043.09. Only determine one AC Gauge offset amount per JMF. If more than 30 days has lapsed since the JMF was last tested, re-do the offset procedure above with two verification pans (one from the contractor and one from the district). If an AC Gauge offset amount is later determined, by an investigation of both the Contractor and the District, to be incorrect re-do the offset procedure. In addition, also determine the AC gauge offset following the current procedure as outlined in Supplement 1043 Dated January 18, 2019 and provide the information to the Department. This AC gauge offset number will not be used during QC testing.

**Traffic Control**

**Item Special – Misc.: Inventory Existing Pavement Markings**

Prior to planing and paving operations, the Contractor is responsible for conducting a field survey of the existing permanent markings excluding center line markings. This inventory shall be used for the placement of temporary markings and proposed final pavement markings. It is the intent of this plan to replace the pavement markings in the same location as the existing pavement markings. Any staking or marking required to establish control points to ensure that markings are accurately placed is the responsibility of the Contractor.

The field survey shall be provided to the Engineer at least two weeks prior to the disturbance of the existing pavement markings for verification and approval. The Engineer will provide written concurrence once the inventory has been approved. The Engineer will also verify all permanent marking locations prior to the actual installation.

The Contractor must lay out all center lines using the most recent copy of the No Passing Zone log. Copies of the No Passing Zone log can be obtained from the District 12 Roadway Services Department or can be found on the web at: <http://www.dot.state.oh.us/districts/D12/HighwayManagement/Pages/NoPassingZones.aspx>

Install transverse lines at the spacing indicated on SCD TC-71.10.

The following quantity has been carried to the General Summary to be used as directed by the Engineer:

Item Special – Misc.: Inventory Existing Pavement Markings..... **Lump Sum**

**Item 621 – Raised Pavement Marker Removed**

This item shall include the removal and disposal of RPMs.

The following estimated quantity has been carried to the General Summary:

Item 621 – Raised Pavement Marker Removed..... **472 Each**

**Item 632 – Detector Loop, As Per Plan**

All stop line inductance detector loops shown in the plans shall be the powerhead configuration shown on TC-82.10. The width shall be as specified on TC-82.10 and the length shall match the existing detector loop length, with a maximum length of 35'. The stop line detector loops shall not be wired to any other loops and shall have their own detector channel. The location of these loops shall be such that the powerhead is located at the stop line, not past it.

All dilemma zone inductance detector loops called for in the plans shall be the Angular Design Detection (A.D.D.) loop as shown on TC-82.10. Dimensions shall be as specified on TC-82.10.

System loops shall be as depicted in the plans. All stop line detection shall be tested for a bicycle target and all dilemma detection zones shall be tested for a motorcycle target. Install detector loops in the surface course within 72 hours of its placement.

When replacing the loop detectors, the loop detector wire shall be replaced to the pull box or pole, whichever is applicable, under Item 632 and TC-82.10. The new cable splice kits shall be included in this pay item.

The Contractor shall contact the Project Engineer and Keith Hamilton, (216) 584-2220, District 12 Traffic Engineer, seven (7) days prior to planing through an intersection to adjust signal operation as needed.

The District 12 Traffic Engineer shall concur with the location of the replacement loops. The following estimated quantity has been carried to the General Summary for use as described above:

**Detector Loop Locations**

REFERENCE NO.	SEE SHEET NO.	LOCATION	632	632
			6' X 20' POWERHEAD DETECTOR LOOP	4.5' X 9' ANGULAR DESIGN DETECTION LOOP
			EACH	EACH
L-1	13	SR-608 SB at intersection with U.S. 322	1	1
<b>TOTAL CARRIED TO GEN. SUMMARY</b>			<b>2</b>	

**Detection Maintenance**

If vehicle detection becomes unexpectedly disabled, requires modification, or is scheduled to be temporarily removed during the construction project, the Contractor shall immediately notify the Project Engineer and District Traffic Engineer.

If the loss of vehicle detection is known prior to the start of construction, it shall be discussed at the preconstruction meeting. At such time, the District Traffic Engineer shall advise the Project Engineer and Contractor on the appropriate action to rectify any loss of vehicle detection. This may include placing the traffic signal on minimum or maximum recall, modifying the minimum green times, and removing the malfunctioning detection from service. Where non-intrusive detection (i.e. video, radar) already exists, the Contractor shall insure that detection is operating and maintained by reconfiguring the detection units accordingly during all construction phases. This is to avoid the signal from maxing out the effected signal phase and creating unnecessary delays.

Locations where non-intrusive detection is proposed and the existing vehicle detection is to be abandoned, the non-intrusive vehicle detection shall be installed, configured and made fully functional prior to the existing detection being disabled. The Contractor shall continue to maintain and modify the detection until final acceptance of the traffic signal. This is to ensure vehicle detection remains fully functional throughout construction.





