

<u>ITEM 450.231</u>	<u>SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC - 12.5-P)</u>	<u>TON</u>
<u>ITEM 450.31</u>	<u>SUPERPAVE INTERMEDIATE COURSE – 12.5 (SIC – 12.5)</u>	<u>TON</u>
<u>ITEM 450.32</u>	<u>SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)</u>	<u>TON</u>
<u>ITEM 450.42</u>	<u>SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5)</u>	<u>TON</u>
<u>ITEM 450.51</u>	<u>SUPERPAVE LEVELING COURSE - 4.75 (SLC - 4.75)</u>	<u>TON</u>
<u>ITEM 450.601</u>	<u>SUPERPAVE BRIDGE SURFACE COURSE 9.5 POLYMER (SSC-B – 9.5-P)</u>	<u>TON</u>
<u>ITEM 450.70</u>	<u>SUPERPAVE BRIDGE PROTECTIVE - COURSE-9.5 (SPC-B-9.5)</u>	<u>TON</u>
<u>ITEM 451.</u>	<u>HMA FOR PATCHING</u>	<u>TON</u>
<u>ITEM 452.</u>	<u>ASPHALT EMULSION FOR TACK COAT</u>	<u>GALLON</u>
<u>ITEM 453.</u>	<u>HMA JOINT SEALANT</u>	<u>FOOT</u>

Work under these Items shall conform to the relevant provisions of the 1988 Standard Specifications, the April 2019 Supplemental Specifications and the following:

The estimated traffic level to be used for SUPERPAVE HMA mixture designs for this contract, expressed in Equivalent Single Axle Loads (ESALs) for the design travel lane over a 20-year period, is 3.1 Million 18-kip (80-kn) ESALs.

The Asphalt Binder used for all HMA mixtures under this contract shall comply with the requirements of Material Section M3.01.0 and M3.01.3A and AASHTO M332.

The PGAB Grade selected for the following items is PG 64E-28:

- SUPERPAVE Surface Course - 12.5 (SSC – 12.5)
- SUPERPAVE Bridge Surface Course - 9.5 (SSC-B – 9.5)

The PGAB for all other items under this contract shall be PG 64-28.

The emulsion under this specification shall be Grade RS-1h and shall meet the requirements of AASHTO M 140.

ITEM 450.231 – ITEM 453. (Continued)**Warm-Mix Asphalt Additive**

All Hot Mix Asphalt mixtures shall be modified using a WMA additive capable of lowering plant production temperatures of unmodified binders to below 260°F. The WMA additive shall be a product listed on the Northeast Asphalt User Producer Group (NEAUPG) website (http://www.neaupg.uconn.edu/?attachment_id=345), except that no WMA foaming technology which requires the mechanical injection of steam or water into the liquid asphalt will be permitted.

For HMA mixtures placed on Bridge decks, the WMA additives shall serve as a compaction aide. Mixture production temperatures shall not be lowered for HMA placed on bridge decks.

The WMA additive must be compatible with polyphosphoric acid modified binders, polymer modified binders, and the HMA Producer's HMA anti-stripping agents. The WMA additive shall be introduced in accordance with the Manufacturer's dosing rates and approved blending methods. The Manufacturer of the WMA additive shall have an on-site representative at the beginning of paving operations. The Manufacturer's representative shall be available for additional consultation during the remaining production.

Work shall conform to the provisions of Sections 450 and 455. The WMA mixture design shall incorporate the requirements of AASHTO R35 Appendix X2: Special Mixture Design Considerations and Practices for Warm Mix Asphalt (WMA).

When the asphalt binder is modified with the WMA additive at the HMA plant, all WMA additive equipment shall be fully automated and integrated into the plant controls and shall record actual dosage rates on the plant printouts.

The HMA QC Plan shall provide mixture production and placement alterations due to the WMA additive and shall incorporate the modification of asphalt binders when the WMA additive is blended with the asphalt binder at the plant. This plan shall specifically address WMA metering requirements, tolerances and other QC measures.

All costs including the WMA additive, equipment, labor, Manufacturer's representative, production of samples and incidental costs required to modify the HMA shall be incidental to the associated HMA pay items with no additional compensation.

ITEM 999.1

**COORDINATION WITH PRIVATE UTILITIES
FOR WORK “BY OTHERS”**

LUMP SUM

Work under this item shall consist of the coordination of work schedules with private Utility Owners for work noted in the contract drawings as “by others”. The Contractor is responsible for coordinating and scheduling any work required to be performed by private Utility Owners as early as possible to prevent undue delays to the project.

The work includes all communication, coordination, meetings, review of plans, and providing safe access for utility owners and operators for their respective utility and related work. The work also includes any communication and/or coordination with the City of Lowell and Engineer as required to facilitate the work “by others”. The Contractor shall provide copies of all communication with the private Utility Owners to the Engineer.

The work also includes coordination with private utility companies during the bridge demolition to provide support of the existing ducts that are to remain in service. During the fill operations the Contractor shall provide the private utility companies the ability to inspect and repair/replace the existing duct banks that are to remain prior to concrete encasement.

The Contractor shall notify the Engineer in advance of any meeting they initiate with a Utility Owner’s representative to allow the City of Lowell to participate in the meeting if needed.

The contractor is also required to coordinate with the private Utility Owners to ensure that the continuity of service for gas, telecom, cable, fiber, electric, and any other privately-owned utilities are maintained throughout the duration of the project, as required.

The costs for all labor, materials, tools, equipment and incidental items required for the excavation, backfilling, compacting and temporary restoration of trenches; cutting, purging, and capping of gas pipes; installation of manholes/handhole structures, abandonment of existing manhole structures, installation of conduit duct banks, concrete encasement, and installation of conduit bridge hangers/supports; cable/wiring relocations, splicing, and service connections shall be the responsibility of the respective private utility companies, and all costs connected therein shall NOT be included in this contract. All utility infrastructure work shall be the responsibility of the private Utility Owners.

The coordination with police details for work completed “by others” will be the responsibility of the private utility owners.

Where the work “by others” falls within the Contractor’s active work zone where police details are required, the Contractor is responsible for the police services payment under Item 999.2. The Contractor is responsible to coordinate with the private utility owners to determine when they are responsible to provide their own police services.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 999.1 shall be measured and paid for at the contract unit price per Lump Sum. This cost shall include all labor, materials, tools, equipment and incidental costs required to coordinate the work for the relocation of private utilities as noted in the contract drawings as “by others”.

ITEM 999.1 (Continued)

The costs for equipment, labor, and material, and incidental work required to temporarily protect and temporarily support the existing utilities in place for the demolition of the Appleton Street and Middlesex Street bridges will be paid for under Item 115.1 - Demolition of Bridge No. L-15-063(2BX) or Item 115.2 - Demolition of Bridge No. L-15-064(2BY). The permanent support of the utilities within the proposed embankment fill, included but not limited to ordinary borrow, controlled density fill, cement concrete and associated labor shall be paid for separately under their respective items.

No payments will be made under this item for the creation of the utility baseline schedule and monthly updates to the CPM baseline schedule for private utility work. This work shall be considered incidental to Item 100. – Schedule of Operations.

No payments to the private utility owners shall be made for the work included under this item.