

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Section 02 41 13.14 – Asphalt Pavement Removal
- .2 Section 31 24 13 – Roadway Excavation
- .3 Section 32 11 16.01 – Granular Sub-base
- .4 Section 32 11 23 – Aggregate Base Courses
- .5 Section 32 12 13.16 – Asphalt Tack Coat
- .6 Section 32 12 13.23 – Asphalt Prime Coat
- .7 Section 32 16 15 – Concrete Walks, Curbs, and Gutters
- .8 Section 32 13 13 – Concrete Paving_R2
- .9 Section 31 22 13 – Roadway Embankment

1.02 PRODUCTS SUPPLIED BUT NOT INSTALLED UNDER THIS SECTION

- .1 There are no items under this heading

1.03 MEASUREMENT AND PAYMENT

- .1 Measurement and payment of Asphalt Concrete Pavement is in Tonnes and includes laying the asphalt mat and compaction to the required density and includes, Preliminary Leveling of Asphalt, Transverse Pavement Joints, and Fillets and Ramps.
- .2 Bonuses and Penalties are not applicable under this part of the Work (No payment adjustment factor).
- .3 Density, Smoothness, and Segregation, determined to be in penalty in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) shall be identified for remediation or rejection at the discretion of the Department Representative.
- .4 Payment for the supply of liquid anti-strip additive where required based on the results of moisture susceptibility testing, will be made at the rate of \$9.00 per kg.
- .5 Haul of Asphalt from David Thompson Pit to the David Thompson site will be paid in cubic meter kilometer (m3.km) and measured from the Plant in David Thompson Pit to the David Thompson site .
- .6 The supply and application of the Tack Coat is to be included in the Asphalt Paving rate and no separate payment will be made for Tack Coat on this project.

1.04 REFERENCES

- .1 American Association of State Highway and Transportation Officials (AASHTO)
 - .1 AASHTO M320-10, Standard Specification for Performance Graded Asphalt Binder.
 - .2 AASHTO R29-02, Standard Specification for Grading or Verifying the Performance Graded of an Asphalt Binder.
 - .3 AASHTO T245-97(2004), Standard Method of Test for Resistance to Plastic flow of Bituminous Mixtures Using Marshall Apparatus.

- .2 Asphalt Institute (AI)
 - .1 AI MS-2-1994 Sixth Edition, Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types.
- .3 ASTM International
 - .1 ASTM C 88-05, Standard Test Method for Soundness of Aggregates by Use of Sodium Sulphate or Magnesium Sulphate.
 - .2 ASTM C 117-04, Standard Test Method for Material Finer Than 0.075mm (No.200) Sieve in Mineral Aggregates by Washing.
 - .3 ASTM C 123-04, Standard Test Method for Lightweight Particles in Aggregate.
 - .4 ASTM C 127-07, Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate.
 - .5 ASTM C 128-07a, Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate.
 - .6 ASTM C 131-06, Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
 - .7 ASTM C 136-06, Standard Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .8 ASTM C 207-2006, Standard Specification for Hydrated Lime for Masonry Purposes.
 - .9 ASTM D 995--95b(2002), Standard Specification for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
 - .10 ASTM D 2419-09, Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
 - .11 ASTM D 3203-94(2005), Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures.
 - .12 ASTM D 4791-05e1, Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate.
- .4 Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) and all amendments and design bulletins.
- .5 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-8.1-88, Sieves Testing, Woven Wire, Inch Series.
 - .2 CAN/CGSB-8.2-M88, Sieves Testing, Woven Wire, Metric.
- .6 U.S. Environmental Protection Agency (EPA) / Office of Water
 - .1 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

1.05 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit all submittals and quality control testing requirements in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013).
- .2 Sampling, and Testing in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) Specification 3.50.
- .3 Submit to Departmental Representative copies of freight and waybills for asphalt concrete pavement when delivered on site. Departmental Representative reserves right to check weights as material is received.

1.06 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013).

2 PRODUCTS

2.01 MATERIALS

- .1 Materials in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013). The Asphalt Mix shall be Type H1 with PG 58-34. Asphalt material will be supplied by Parks from David Thompson Pit to the David Thompson site.

2.02 EQUIPMENT

- .1 Equipment in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) Specification 3.50.5.1

2.03 MIX DESIGN

- .1 Asphalt will be supplied by Parks from David Thompson Pit to the David Thompson site.

3 EXECUTION

3.01 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for asphalt paving in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental.

3.02 PLANT AND MIXING REQUIREMENTS

- .1 Asphalt will be supplied by Parks from David Thompson Pit to the David Thompson site.

3.03 PREPARATION

- .1 Temporary Erosion and Sedimentation Control:
 - .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
 - .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
 - .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- .2 When paving over existing asphalt surface, clean pavement surface in accordance with Section 32 01 11.01 - Pavement Cleaning and Marking Removal.
 - .1 When levelling course is not required, patch and correct depressions and other irregularities to approval of Departmental Representative before beginning paving operations.
- .3 Apply prime coat and tack coat in accordance with Section 32 12 13.23 - Asphalt Prime Coats and Section 32 12 13.16 - Asphalt Tack Coats prior to paving.
- .4 Prior to laying mix, clean surfaces of loose and foreign material.

3.04 TRANSPORTATION OF MIX

- .1 Transport mix in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) Specifications 3.50.5.3 and 4.5 Hauling.

3.05 TEST STRIP

- .1 Not required for project.

3.06 PLACING

- .1 Placing the mix in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) 3.50.5.4 Placing the Mix.
- .2 Obtain Departmental Representative's approval of base and existing surface and tack coat and prime coat prior to placing asphalt.
- .3 Place asphalt concrete to thicknesses, grades and lines as indicated.
- .4 Placing conditions Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013).
 - .1 Place asphalt mixtures only when air temperature is 5 degrees C minimum.
 - .2 When temperature of surface on which material is to be placed falls below [10] degrees C, provide extra rollers as necessary to obtain required compaction before cooling.
- .5 Place asphalt concrete in compacted lifts in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) 3.50.5.4
- .6 Any frost present in granular layers should be addressed by removal of the frost layer, heating to thaw frost, or waiting for the frost to naturally dissipate prior to placing of Asphalt.

3.07 COMPACTING

- .1 Compaction in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) 3.50.5.6 Compacting the Mix.

3.08 JOINTS

- .1 Joints in accordance with Alberta Transportation Standard Specifications for Highway Construction, Edition 15 (2013) 3.50.5.2 Preparation of Existing Surface.
- .2 Longitudinal joints:
 - .1 Offset longitudinal joints in succeeding lifts by at least 150 mm.
 - .2 Cold joint is defined as joint where asphalt mix is placed, compacted and left to cool below 100 degrees C prior to paving of adjacent lane.
 - .1 If cold joint cannot be avoided, cut back by saw cutting previously laid lane, by at least 150 mm, to full depth vertical face, and tack face with thin coat of hot asphalt of adjacent lane.
 - .3 Overlap previously laid strip with spreader by 25 to 50 mm.
 - .4 Before rolling, carefully remove and discard coarse aggregate in material overlapping joint with lute or rake.
 - .5 Roll longitudinal joints directly behind paving operation.
 - .6 When rolling with static or vibratory rollers, have most of drum width ride on newly placed lane with remaining 150 mm extending onto previously placed and compacted lane.

3.09 FINISH TOLERANCES

- .1 Finished asphalt surface to be within [5] mm of design elevation but not uniformly high or low.
- .2 Finished asphalt surface not to have irregularities exceeding [5] mm when checked with [4.5] m straight edge placed in any direction.

3.10 DEFECTIVE WORK

- .1 Correct irregularities which develop before completion of rolling by loosening surface mix and removing or adding material as required.
 - .1 If irregularities or defects remain after final compaction, remove surface course promptly and lay new material to form true and even surface and compact immediately to specified density.
- .2 Repair areas showing checking, rippling, or segregation.
- .3 Adjust roller operation and screed settings on paver to prevent further defects such as rippling and checking of pavement.

3.11 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

END OF SECTION