

The Executed Agreement including General Conditions and Supplementary Conditions, Division 01, applicable drawings and amendments are part of and are to be read in conjunction with this Section.

1 GENERAL

1.01 RELATED SECTIONS

- .1 Section 31 23 33 - Excavating, Trenching, and Backfilling

1.02 REFERENCES

- .1 Nova Scotia Department of Transportation and Infrastructure Renewal Standard Specification, Highway Construction and Maintenance, Latest Edition.
- .2 American Society for Testing and Materials (ASTM)
 - .1 ASTM C 117-13, Standard Test Methods for Material Finer Than 0.075 mm Sieve in Mineral Aggregates by Washing.
 - .2 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.
 - .3 ASTM C 136-06, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .4 ASTM D 422-63(R2007), Standard Test Method for Particle-Size Analysis of Soils.
 - .5 ASTM D 698-12, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600kN-m/m³).
 - .6 ASTM D 1557-12, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000ft-lbf/ft³) (2,700kN-m/m³).
 - .7 ASTM D 1883-05, Standard Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils.
 - .8 ASTM D 4318-10, Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of

Soils.

- .3 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.

1.03 WASTE MANAGEMENT AND DISPOSAL

- .1 Excavation classes: two classes of excavation will be recognized; common excavation and rock excavation.

1.04 QUALITY ASSURANCE

- .1 Separate and recycle waste materials.
- .2 Divert unused granular material from landfill to local facility to the satisfaction of the Departmental Representative. Do not use soil material until written report of soil test results are reviewed and approved by the Departmental Representative.

2 PRODUCTS

2.01 MATERIALS

- .1 Granular sub-base material: in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling, and as indicated on drawings.

3 EXECUTION

3.01 PLACING

- .1 Place granular sub-base after sub-grade is to the satisfaction of the Departmental Representative.
- .2 Construct granular sub-base to depth and grade in areas indicated.
- .3 Ensure no frozen material is placed.
- .4 Place material only on clean, unfrozen surface, free from snow or ice.
- .5 Place granular sub-base materials using methods which do not lead to segregation or degradation.
- .6 Place material to full width in uniform layers. Lift thickness to be compatible with the compaction equipment used.
- .7 Shape each layer to smooth contour and compact to specified density before succeeding layer is placed.
- .8 Remove and replace portion of layer in which material has become segregated during spreading.

3.02 COMPACTION

- .1 Compaction equipment to be capable of obtaining required material densities.
- .2 Compact to densities in accordance with Project Documents.
- .3 Shape and roll alternately to obtain smooth, even and uniformly compacted sub-base.
- .4 Apply water as necessary during compaction to obtain specified density.
- .5 In areas not accessible to rolling equipment, compact to specified density with mechanical tampers to the satisfaction of the Departmental Representative.
- .6 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.

3.03 QUALITY CONTROL TESTING

- .1 Inspection and testing shall be carried out by the Departmental Representative's Inspection and Testing Consultant.

- .2 Prior to placement of subsequent material the Contractor shall obtain approval from the Departmental Representative's Inspection and Testing Consultant.

3.04 SITE TOLERANCES

- .1 Finished sub-base surface to be within 12 mm of elevation as indicated but not uniformly high or low.

3.05 PROTECTION

- .1 Maintain finished sub-base in condition conforming to this section until succeeding base is constructed, or until granular sub-base is to the satisfaction of the Departmental Representative.

END OF SECTION

The Executed Agreement including General Conditions and Supplementary Conditions, Division 01, applicable drawings and amendments are part of and are to be read in conjunction with this Section.

1 GENERAL

1.01 RELATED SECTIONS

- .1 Section 31 23 33 - Excavating, Trenching, and Backfilling
- .2 Section 32 11 16 - Granular Subbase

1.02 REFERENCES

- .1 Nova Scotia Department of Transportation and Infrastructure Renewal Standard Specification, Highway Construction and Maintenance, Latest Edition.
- .2 American Society for Testing and Materials (ASTM)
 - .1 ASTM C 117-13, Standard Test Methods for Material Finer Than 0.075 mm Sieve in Mineral Aggregates by Washing.
 - .2 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.
 - .3 ASTM C 136-06, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .4 ASTM D 698-12, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600kN-m/m³).
 - .5 ASTM D 1557-12, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000ft-lbf/ft³) (2,700kN-m/m³).
 - .6 ASTM D 1883-05, Standard Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils.
 - .7 ASTM D 4318-10, Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
- .3 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.

1.03 WASTE MANAGEMENT AND DISPOSAL

- .1 Divert unused granular material from landfill to local facility as approved by the Departmental Representative.

2 PRODUCTS

2.01 MATERIALS

- .1 Aggregate base material: in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling, and as indicated on drawings.

3 EXECUTION

3.01 PLACING

- .1 Place granular base after sub-base surface is to the satisfaction of the Departmental Representative.
- .2 Construct granular base to depth and grade in areas indicated.
- .3 Ensure no frozen material is placed.
- .4 Place material only on clean, unfrozen surface, free from snow or ice.
- .5 Place material to full width in uniform layers. Lift thickness to be compatible with the compaction equipment used.
- .6 Shape each layer to smooth contour and compact to specified density before succeeding layer is placed.
- .7 Remove and replace that portion of layer in which

material becomes segregated during spreading.

3.02 COMPACTION

- .1 Compaction equipment to be capable of obtaining required material densities.
- .2 Compact to densities in accordance with Contract Documents.
- .3 Shape and roll alternately to obtain smooth, even and uniformly compacted base.
- .4 Apply water as necessary during compaction to obtain specified density.
- .5 In areas not accessible to rolling equipment, compact to specified density with mechanical tampers to the satisfaction of the Departmental Representative.
- .6 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance. Maintain finished sub-base in condition conforming to this section until succeeding base is constructed, or until granular sub-base is to the satisfaction of the Departmental Representative.

3.03 QUALITY CONTROL TESTING

- .1 Inspection and testing shall be carried out by the Departmental Representative's Inspection and Testing Consultant.
- .2 Prior to placement of subsequent material the Contractor shall obtain approval from the Departmental Representative's Inspection and Testing Consultant.

3.04 SITE TOLERANCES

- .1 Finished sub-base surface to be within plus or minus 10 mm of established grade and cross section but not uniformly high or low.

3.05 PROTECTION

- .1 Maintain finished sub-base in condition conforming to this section until succeeding base is constructed, or until granular sub-base is to the satisfaction of the Departmental Representative.

END OF SECTION

The Executed Agreement including General Conditions and Supplementary Conditions, Division 01, applicable drawings and amendments are part of and are to be read in conjunction with this Section.

1 GENERAL

1.01 SECTION INCLUDES

- .1 Materials and installation for asphalt concrete paving for roadways.
- .2 Work includes fine grading, supply and placement of prime or tack coat and hot mix asphalt concrete.

1.02 RELATED SECTIONS

- .1 Section 03 30 00 - Cast in Place Concrete
- .2 Section 31 23 33 - Excavating, Trenching and Backfilling
- .3 Section 32 16 15 - Concrete Walks Curbs and Gutters
- .4 Section 32 98 00 - Reinstatement

1.03 REFERENCES

- .1 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.
 - .3 CAN/CGSB 1-74-2001 Alkyd Traffic Paint.
- .2 Nova Scotia Department of Transportation and Infrastructure Renewal Standard Specification, Highway Construction and Maintenance, Latest Edition.
- .3 Transportation Association of Canada: Manual of Uniform Traffic Control Devices for Canada.

1.04 PRODUCT DATA

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.

- .2 Submit satisfactory asphalt concrete mix design and trial mix test results to the Departmental Representative for approval at least 4 weeks prior to beginning Work.

1.05 QUALITY CONTROL

- .1 The Departmental Representative's Inspection and Testing Consultant will provide onsite materials testing, review and approve mix design (minimum 48 hours prior to placement), and provide input during placement of the materials.
- .2 While the Departmental Representative will make results of any quality assurance test available to the Contractor, should adjustments be required, the Contractor shall provide the Departmental Representative's Inspection and Testing Consultant with any adjustments to produce uniform, acceptable hot-mix asphalt mixes in conformance with the Contract documents.

2 PRODUCTS

2.01 ASPHALT CEMENT

- .1 Performance Graded Asphalt Cement (PGAC) conforming to the requirements of Nova Scotia Department of Transportation and Infrastructure Renewal Highway Construction and Maintenance Standard Specifications, latest Edition.
- .2 The asphalt cement shall be homogeneous, free of water and any contamination and shall not foam when heated to the temperatures specified by the manufacturer for safe handling and use of the product. It shall be shipped, used and handled at all times in accordance with the manufacturer's specifications.
- .3 For each grade of asphaltic cement specified in the Contract, the Contractor shall supply to the Departmental Representative, test results and two 1 litre samples for the products proposed for use to demonstrate compliance to the requirements at least 20

- calendar days prior to the first use of the product.
- .4 The Contractor shall also concurrently provide the applicable mixing and compaction temperatures for each product, and documentation of construction, storage and handling requirements, including material safety data sheet, re-compaction temperature, mix discharge temperature and recommended extraction procedure.
 - .5 The Contractor shall provide the Departmental Representative with the asphalt cement supplier's certified test report for each lot of asphalt cement shipped to the work site.

2.02 EQUIPMENT

- .1 Pavers: mechanical grade controlled self-powered pavers capable of spreading mix within specified tolerances, true to line, grade and crown indicated.
- .2 Rollers: sufficient number of type and weight to obtain specified density of compacted mix.
- .3 Vibratory rollers:
 - .1 Minimum drum diameter: 750 mm.
 - .2 Maximum amplitude of vibration (machine setting): 0.5 mm for lifts less than 40 mm thick.
- .4 Haul trucks: sufficient number and of adequate size, speed and condition to ensure orderly and continuous operation and as follows:
 - .1 Boxes with tight metal bottoms.
 - .2 Covers of sufficient size and weight to completely cover and protect asphalt mix when truck fully loaded.
 - .3 In cool weather or for long hauls, insulate entire contact area of each truck box.
 - .4 Use only trucks which can be weighed in single operation on scales supplied.
- .5 Hand tools:
 - .1 Suitable hand tools.

2.03 MIX DESIGN

- .1 Mix design to be approved by the Departmental

Representative.

- .2 Mix design to Nova Scotia Department of Transportation and Infrastructure Renewal Highway Construction and Maintenance Standard Specifications, latest Edition and type as specified in the contract documents.

2.04 PAINT FOR PAVEMENT

- .1 Paint for pavement marking to CGSB 1-GP-74M, colour as directed.

3 EXECUTION

3.01 PREPARATION

- .1 Granular Sub-base as per Section 32 11 16 - Granular Sub-Base.
- .2 Granular Base as per Section 32 11 23 - Aggregate Base Courses.
- .3 Prior to placing asphalt surface course:
 - .1 Adjust manhole covers and catchbasin frames to match asphalt surface, using manufactured grade rings.
 - .2 Adjust valve boxes to finished asphalt surface. Raise or lower top sections of valve boxes.
- .4 Prior to laying mix, clean surfaces of loose and foreign material.
- .5 Fine grade gravel surface to within 10mm of elevations and cross sections indicated immediately prior to placement of asphalt materials. Add or remove gravel as required. Compact to 100% Standard Proctor Density or as directed by the Departmental Representative.
- .6 Prime Coat: When required by project documents, apply prime coat to Nova Scotia Transportation and Infrastructure Renewal Standard Specifications - Highway Construction and Maintenance, Division 4, Section 5.
- .7 Tack Coat: Apply tack coat on existing asphalt concrete to Nova Scotia Transportation and Infrastructure Renewal Standard Specification - Highway Construction and Maintenance, Division 4,

Section 1. Apply tack coat to contact surface of curbs, castings, and structures.

3.02 PLACING

- .1 Use workers skilled in placing asphalt concrete.
- .2 All material to be to the satisfaction of the Departmental Representative prior to placing asphalt.
- .3 Place asphalt concrete to thicknesses, grades and lines as indicated on the Drawings and to the satisfaction of the Departmental Representative.
- .4 Placing conditions:
 - .1 Place asphalt mixtures only when air temperature is above 5 degrees C.
 - .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.
 - .3 Do not place hot-mix asphalt when pools of standing water exist on surface to be paved, during rain, or when surface is damp.
- .5 Place asphalt concrete in compacted lifts of thickness as indicated on the diagrams.
- .6 Minimum 135°C mix temperature required when spreading.
- .7 Maximum 160°C mix temperature permitted at anytime.

3.03 COMPACTING

- .1 Compact all paved areas to a density of not less than 95% of density obtained with Marshall specimens prepared in accordance with ASTM D 1559-89 from samples of mix being used. Roll until roller marks are eliminated.
- .2 General:
 - .1 Start rolling operations as soon as placed mix can bear weight of roller without excess displacement of material or cracking of surface.
 - .2 Operate roller slowly initially to avoid displacement of material. Do not exceed 5 km/h

for breakdown and intermediate rolling for static steel-wheeled and pneumatic tired rollers. Do not exceed 9 km/h for finish rolling.

- .3 Overlap successive passes of roller by minimum of 200 mm and vary pass lengths.
- .4 Keep wheels of roller slightly moistened with water to prevent pick-up of material but do not over-water.
- .5 Do not stop vibratory rollers on pavement that is being compacted with vibratory mechanism operating.
- .6 Do not permit heavy equipment or rollers to stand on finished surface before it has been compacted and has thoroughly cooled.
- .7 After transverse and longitudinal joints and outside edge have been compacted, start rolling longitudinally at low side and progress to high side. Ensure that all points across width of pavement receive equal numbers of passes of compactors.
- .8 Where rolling causes displacement of material, loosen affected areas at once with lutes or shovels and restore to original grade of loose material before re-rolling.
- .9 Compact mix with hot tampers or other equipment to the satisfaction of the Departmental Representative, in areas inaccessible to Roller.

3.04 QUALITY CONTROL TESTING

- .1 Inspection and testing shall be carried out by the Departmental Representative's Inspection and Testing Consultant.
- .2 Prior to placement of subsequent material the Contractor shall obtain approval from the Departmental Representative's Inspection and Testing Consultant.

3.05 JOINTS

- .1 General:
 - .1 Remove surplus material from surface of previously laid strip. Do not deposit on surface

- of freshly laid strip.
- .2 Paint contact surfaces of existing structures such as manholes, curbs, or gutters with bituminous material prior to placing adjacent pavement.
- .2 Transverse Joints:
 - .1 Offset transverse joint in succeeding lifts by at least 600 mm.
 - .2 Cut back to full depth vertical face and tack face with thin coat of hot asphalt prior to continuing paving.
 - .3 Compact transverse joints to provide smooth riding surface. Use methods to prevent rounding of compacted surface at joints.

3.06 FINISH TOLERANCES

- .1 Finished asphalt surface to be within 6 mm of design elevation but not uniformly high or low.
- .2 Finished asphalt surface not to have irregularities exceeding 6 mm when checked with 3 m straight edge placed in any direction.

3.07 DEFECTIVE WORK

- .1 Correct irregularities which develop before completion of rolling by loosening surface mix and removing or adding material as required. 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.

3.08 PROTECTION

- .1 Keep vehicular traffic off newly paved areas until

paving surface temperature has cooled below 38°C. Do not permit stationary loads on pavement until 24 hours after placement.

- .2 Provide access to buildings as required. Arrange paving schedule so as not to interfere with normal use of premises.

END OF SECTION

The Executed Agreement including General Conditions and Supplementary Conditions, Division 01, applicable drawings and amendments are part of and are to be read in conjunction with this Section.

1 GENERAL

1.01 RELATED SECTIONS

- .1 Section 03 30 00 - Cast In Place Concrete
- .2 Section 31 23 33 - Excavating, Trenching and Backfilling
- .3 Section 32 12 16 - Asphalt Paving
- .4 Section 03 10 00 - Concrete Forming and Accessories
- .5 Section 32 98 00 - Reinstatement

1.02 REFERENCES

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM D 698-12, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600kN-m/m³).
 - .2 ASTM D1751-04 (R2008), Preformed Expansion Joint Filler for Concrete paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.2-98, Boiled Linseed Oil.
 - .2 CAN/CGSB-3.3-2007, Kerosene.
- .3 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A23.1/A23.2-09, Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
- .4 Nova Scotia Transportation and Infrastructure Renewal Standard Specifications - Highway Construction and Maintenance.

1.03 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials.

- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely

1.04 QUALITY ASSURANCE

- .1 Installer Qualifications: Installer must have a adequate equipment, and skilled works to perform the work expeditiously.
- .2 Mock-up Panels: Provide a 1500mmx1500mm area selected by the Departmental Representative, complete with finish, contraction joint, and expansion joint for acceptance of remainder of work in this section. When accepted, quality of workmanship of balance of work shall meet or exceed quality of accepted mock-up.

2 PRODUCTS

2.01 MATERIALS

- .1 Concrete mixes and materials: to Section 03 30 00 - Cast-in-Place Concrete, at 28 days, slump 80mm.
- .2 Joint filler and Curing Compound: to Section 03 30 00 - Cast-in-Place Concrete.
- .3 Granular base: to Section 31 23 33 - Excavating, Trenching and Backfilling.
- .4 Non-staining mineral type form release agent: chemically active release agents containing compounds that react with free lime to provide water soluble soap.
- .5 Fill material: to Section 31 23 33 - Excavating, Trenching and Backfilling.
- .6 Boiled linseed oil: to CAN/CGSB-1.2-98.
- .7 Kerosene: to CAN/CGSB-3.3-2007.

3 EXECUTION

3.01 GRADE PREPARATION

- .1 Do grade preparation work in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling.
- .2 Construct embankments using excavated material free from organic matter or other objectionable materials. Dispose of surplus and unsuitable excavated material off site at approved location.
- .3 When constructing embankment, provide for minimum 0.5 m shoulders, where applicable, outside of neat lines of concrete.
- .4 Place fill in lifts compatible with compaction equipment and compact to at least 100% of maximum density to ASTM D 698.

3.02 GRANULAR BASE

- .1 Subgrade to be to the satisfaction of the Departmental Representative prior to placing granular base.
- .2 Place granular base material to lines, widths, and depths as indicated.
- .3 Place fill in lifts compatible with compaction equipment and compact to at least 100% of maximum density to ASTM D 698.
- .4 Adjust castings to match finished surface prior to placing surface course of asphalt concrete, or Portland cement concrete.

3.03 CONCRETE

- .1 Granular base and reinforcing steel to be to satisfaction of the Departmental Representative prior to placing concrete.
- .2 Do concrete work in accordance with Section 03 30 00 - Cast-in-Place Concrete.
- .3 Finish to be light sandblasted, providing a uniform finish to produce regular depressions not exceeding 2 mm deep.
- .4 Slip-form pavers equipped with string line system for line and grade control may be used if quality of work to the satisfaction of the Departmental Representative. Hand finish surfaces when directed by the Departmental Representative.

3.04 QUALITY CONTROL TESTING

- .1 Inspection and testing shall be carried out by the

Departmental Representative's Inspection and Testing Consultant.

- .2 Prior to placement of subsequent material the Contractor shall obtain approval from the Departmental Representative's Inspection and Testing Consultant.

3.05 TOLERANCES

- .1 Finish surfaces to within 3 mm as measured with 3 m straightedge placed on surface.

3.06 EXPANSION AND CONTRACTION JOINTS

- .1 Control joints to be minimum of one quarter of section thickness.
- .2 Geometry of all control joints to conform to locations shown on Landscape drawings.
- .3 Provide a control joint within 150mm of change in cross section of curbs, gutters and walks.
- .4 Finish perimeters of all slabs with an edger.
- .5 All control joint to be saw cut.
- .6 Install expansion joints to the satisfaction of the Departmental Representative at intervals of 50m and at every cold joint.
- .7 Prior to installation of expansion and contraction joints in the plaza area, review planned saw cut placements with the Departmental Representative and only proceed upon receiving their approvals.

3.07 INSULATION JOINTS

- .1 Install isolation joint filler around manholes and catch basins and along length adjacent to concrete curbs, catch basins, buildings, or permanent structures.
- .2 Install joint filler in isolation joints in accordance with Section 03 30 00 - Cast-in-Place Concrete or as indicated.
- .3 Seal isolation joints with sealant to the satisfaction of the Departmental Representative.

3.08 CURING

- .1 Cure concrete by adding moisture continuously in accordance with CAN/CSA-A23.1 to exposed finished surfaces for at least 1 day after placing, or sealing moisture in by curing compound to the satisfaction of

the Departmental Representative.

- .2 Where burlap is used for moist curing, place two pre-wetted layers on concrete surface and keep continuously wet during curing period.
- .3 Apply curing compound in accordance with CSA A23.1. Apply evenly to form continuous film and in accordance with manufacturer's requirements.

3.09 BACKFILL

- .1 Allow concrete to cure for 7 days prior to backfilling.
- .2 Backfill to designated elevations with material to the satisfaction of the Departmental Representative. Compact and shape to required contours as indicated or as to the satisfaction of the Departmental Representative.

3.10 LINSEED OIL TREATMENT

- .1 After concrete has cured for specified curing time and when surface of concrete is clean and dry, apply two coats of linseed oil mixture uniformly to surfaces of sidewalks, curbs, walks and gutters.
- .2 Linseed oil mixture to consist of 50% boiled linseed oil and 50% mineral spirits by volume.
- .3 Apply treatment when air temperature above 10°C.
- .4 Apply first coat at 135 mL/m².
- .5 Apply second coat at 90 mL/m² when first coat has dried.

3.11 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers to the satisfaction of the Departmental Representative.

END OF SECTION

The Executed Agreement including General Conditions and Supplementary Conditions, Division 01, applicable drawings and amendments are part of and are to be read in conjunction with this Section.

1 GENERAL

1.01 WORK INCLUDED

- .1 This section specifies requirements for reinstatement of surfaces, property, and structures damaged or disturbed by operations under this Contract. Work includes but is not limited to reinstatement of paved, graveled and grassed surfaces; sidewalks, curbs and gutters; and ditches and culverts.

1.02 RELATED SECTIONS

- .1 Section 03 30 00 - Cast in Place Concrete
- .2 Section 31 23 33 - Excavating, Trenching, and Backfilling
- .3 Section 32 12 16 - Asphalt Concrete Paving
- .4 Section 32 16 15 - Concrete Walks, Curbs and Gutters
- .5 Section 33 11 16 - Site Water Utility Distribution Piping
- .6 Section 33 31 13 - Public Sanitary Utility Sewerage Piping

1.03 REFERENCES

- .1 Nova Scotia Transportation and Infrastructure Renewal Specification - Highway Construction and Maintenance.

2 PRODUCTS

2.01 MATERIALS

- .1 Asphalt Concrete Materials: to Nova Scotia Transportation and Infrastructure Renewal Specification, Division 4, Section 4 - Highway Construction and Maintenance.
- .2 Concrete Materials: to Section 03 30 00.

2.02 MIXES

- .1 Asphalt Concrete:

- .1 Roads: to Section 32 12 16.
- .2 Walks and Curbs: to Section 32 16 15.
- .2 Portland cement concrete: to Section 03 30 00.

3 EXECUTION

3.01 GENERAL

- .1 Reinstate all surfaces to lines, elevations and dimensions which existed prior to construction and to match abutting surfaces.
- .2 Make good all damage or disturbances to surfaces, survey markers, properties and structures disturbed during construction.

3.02 GRAVEL SURFACES

- .1 Place, spread, and fine grade to minimum compacted thickness of 150mm for shoulders and other gravel surfaces. Compact at 100% Standard Proctor Density.

3.03 ASPHALT CONCRETE SURFACES

- .1 Make vertical saw cut to full depth of asphalt concrete in straight lines. Cut back 300mm minimum from edge of excavation or beyond to eliminate tension cracks
- .2 Place or remove gravel to depth indicated.
- .3 Shape, fine grade and compact gravel surface to 100 percent Standard Proctor Density.
- .4 Clean contact surfaces and apply tack coat prior to placing asphalt concrete.
- .5 Place and compact hot-mix, hot-placed asphalt concrete to Section 32 12 16, and to the following minimum thickness or as indicated in the Project Documents.

3.04 ASPHALT CONCRETE CURBS

- .1 Cut back existing curb to full cross section, clean asphalt concrete contact surfaces and apply tack coat prior to placing asphalt concrete curb.
- .2 Place hot-mix, hot-placed asphalt concrete to Nova Scotia Transportation and Infrastructure Renewal Standard Specification - Highway Construction and Maintenance. Use curb machine having mould dimensions

equal to those of the existing asphalt concrete curb.
Hand placing not permitted unless approved by
Departmental Representative.

3.05 CONCRETE WALKS, CURBS, AND GUTTERS

- .1 Construct concrete walks, curbs and gutters to Section 32 16 15.
- .2 Terminate reinstatement at nearest existing control joint or as directs.

3.06 LANDSCAPED SURFACES

- .1 Fine grade to smooth surface, all areas disturbed by construction activities shall be reinstated.

3.07 DITCHES

- .1 Re-establish ditches to provide drainage that existed prior to construction.

3.08 CULVERTS

- .1 Repair or replace all damaged culverts with new culverts of same material and to lines, elevations, and dimensions as original unless otherwise indicated.

END OF SECTION