

## **01 11 00 SUMMARY OF WORK**

### **Part 1 General**

#### **1.1 PRECEDENCE**

- .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

#### **1.2 DEFINITIONS**

- .1 British Columbia Ministry of Transportation and Infrastructure is referred to as "MoTI".
  - .1 BC MoTI specifications specified for the work can be found at the following website address:  
<http://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/standard-specifications-for-highway-construction>
- .2 Alberta Transportation is referred to as "AT".
  - .1 AT specifications specified for the work can be found at the following AT website address:  
[http://www.transportation.alberta.ca/images/Standard\\_Specifications\\_for\\_Highway\\_Construction\\_2013.pdf](http://www.transportation.alberta.ca/images/Standard_Specifications_for_Highway_Construction_2013.pdf)
- .3 Changes in Definition, - The following changes in definitions have been made to the "BC MoTI Specifications":
  - .1 Ministry Representative – The word "Ministry Representative" shall mean Parks Canada Departmental Representative or their duly appointed representative.
  - .2 Ministry – The word "Ministry" shall mean Parks Canada Agency.
- .4 Changes in Definition, - The following changes in definitions have been made to the "AT Specifications":
  - .1 Consultant – The word "Consultant" shall mean Departmental Representative or their duly appointed representative
  - .2 Department – The word "Department" shall mean Parks Canada Agency.
- .5 Banff National Park of Canada is referred to as "BNP".
- .6 Jasper National Park of Canada is referred to as "JNP".
- .7 Trans-Canada Highway is referred to as "TCH".
- .8 Highway 93 North is referred to as "Hwy 93N".
- .9 Highway 11 is referred to as "Hwy 11"
- .10 Parks Canada Agency is referred to as "PCA".
- .11 Environmental Surveillance Officer is referred to as "ESO".
- .12 Watercourse is as defined in the National Parks Act.
- .13 Site means the areas on or within the limits of Construction as referenced on the Drawings and/or described in the Contract Documents.
- .14 Work means the provision of all labour, services, material, and equipment as necessary for the Contractor to complete and perform its obligations in accordance with the Contract.

### **1.3 PROJECT LOCATION**

- .1 The project is located in Banff National Park, Alberta. Construction work is on Highway 93N between km 64 to 83. The following are key locations relative to the project:
  - .1 TCH km 81 – Rock Quarry, BNP
  - .2 Hwy 93N km 0 – TCH and Hwy 93N Intersection, BNP
  - .3 Hwy 93N km 0.4 – Niblock Pit, BNP
  - .4 Hwy 93N km 75.95 – Hwy 93N and Hwy 11 (David Thompson Highway) Intersection
  - .5 Hwy 11 km 3.2 – David Thompson Pit, BNP
  - .6 Hwy 93N km 120.9 – Banff and Jasper National Parks Boundary
  - .7 Hwy 93N km 227.4 – Hwy 93N and Hwy 16 Intersection, JNP

### **1.4 WORK COVERED BY CONTRACT DOCUMENTS**

- .1 The project work consists of approximately 20 km of highway overlay paving, supply, installation, maintenance, removal and disposal of a temporary two-lane detour, removal and disposal of an existing culvert, and supply and installation of a new precast concrete box culvert.
- .2 All requirements noted within the Contract Documents shall be completed by the Contractor unless specifically stated otherwise.
- .3 Without limiting the scope of work, the work of this Contract generally comprises the following, as directed by the Departmental Representative:
  - .1 Existing utility protection and lid adjustment in agreement with utility providers as directed by the Departmental Representative.
  - .2 Clearing and Grubbing of areas designated in the Contract documents in accordance with Section 31 11 00 – Clearing and Grubbing.
  - .3 Stripping and stockpiling of organic material designated in the Contract documents and in accordance with Section 31 24 13 – Roadway and Drainage Excavation.
  - .4 Design, construction, operation, maintenance, removal and disposal of a temporary two-lane paved detour in accordance of Section 01 35 32 – Special Procedures for Traffic Detours.
  - .5 Installation and maintenance of temporary barriers and supply and installation of temporary traffic control and other temporary construction facilities required for completion of the Work of the Project.
  - .6 Removal of existing asphalt by milling and stockpiling material in accordance with Section 02 41 13 – Asphalt Pavement Removal.
  - .7 Excavating all types of material from the right-of-way cuts, hauling and placing this material in embankments or in stockpiles designated in the Contract Documents and in accordance with Section 31 24 13 – Roadway and Drainage Excavation.
  - .8 Supply and installation of Fill material in areas designated in the Contract documents in accordance with Section 31 24 12 – Roadway and Drainage Excavation.

- .9 Winter sand removal, grading of existing base course and proof rolling of existing compacted base course surfaces, as necessary, to provide a suitable surface for ACP placement.
- .10 Produce or supply, load, haul and place gravel fill materials for Detour and Precast Concrete Box Culvert in accordance with Section 32 11 20 –Gravel Fill.
- .11 Produce or supply, load, haul and place base course materials for Detour and Precast Concrete Box Culvert in accordance with Section 32 11 24 – Granular Base Course.
- .12 Produce or supply, load, haul and place AT Designation 1 Class 16mm Asphalt Concrete Pavement using 150-200A asphalt binder in accordance with Section 32 12 16 – Asphalt Concrete Pavement (EPS)
- .1 Purchase asphalt binder 150-200A and mix with aggregate. Perform mix design for AT Designation 1 Class 16mm Asphalt Concrete Pavement using 16mm aggregate and 150-200A asphalt binder
- .13 Virgin pit material and pit-run aggregate is available for extraction and aggregate production at David Thompson Pit which the Contractor may use for gravel fill, base course, and asphalt aggregate on this Project only. Approximate quantities are shown on the David Thompson Pit plan. The Contractor is responsible for verifying these quantities prior to use. The Contractor is also responsible for all handling, stockpiling and testing of the Owner-supplied material related to aggregate production.
- .14 Use of processed Reclaimed Asphalt Pavement (RAP) material in hot mix asphalt construction is permitted to maximum 10% in accordance with AT Standard Specifications for Highway Construction (latest edition) and as accepted by the Departmental Representative.
- .15 Removal and disposal of existing CSP culvert(s) in accordance with Section 33 42 36 – Precast Concrete Box Culvert as per the Contract Documents and as directed by the Departmental Representative.
- .16 Supply and installation of Precast Concrete Box Culvert (PCBC) designated in the Contract Documents and in accordance with Section 33 42 36 – Precast Concrete Box Culvert
- .17 Supply and installation of Geotextiles in accordance with Section 31 32 19 – Geotextiles.
- .18 Installation of Riprap in accordance with Section 31 37 00 – Riprap.
- .19 Placement of topsoil on finished slopes in accordance with Section 32 91 19 – Topsoil Placement and Grading.
- .20 Supply and installation of hydroseeding on finished slopes in accordance with Section 32 92 22 – Hydraulic Seeding.
- .21 Supply and installation of temporary roadway paint markings during construction as required in accordance with Section 01 35 31 – Special Procedures for Traffic Control.
- .22 Removal, stockpile, and installation of modified British Columbia Ministry of Highways Precast Concrete Barriers as per the Contract Documents and as directed by the Departmental Representative in accordance with Section 33 71 13 – Precast Concrete Barrier.

- .23 Permanent line markings to be installed at the completion of the work as per the Contract Documents and as directed by the Departmental Representative in accordance with Section 32 17 23 – Pavement Marking.
- .24 Traffic signage, control and other traffic accommodations in accordance with Section 01 35 31 – Special Procedures for Traffic Control.
- .25 Miscellaneous Additional Work as directed by the Departmental Representative.
- .4 The Contractor will be permitted to set up a mobile crushing plant within David Thompson Pit at locations noted in the Contract Documents, outside of the National Parks or as directed by the Departmental Representative. Aggregate produced will be stockpiled in David Thompson Pit. Waste material will be disposed of accordingly outside of the National Parks.
  - .1 Minimum combined Horse Power for the crushing plant shall be 200 HP. All aggregate which will pass through 375 mm x 450 mm slotted screen openings shall be used for the production of crushed aggregate using a jaw crusher. Rocks which will not pass through these openings shall be stockpiled at locations in the pit as directed by the Departmental Representative. No portion of the products of crushers or screening plants that can be used shall be wasted but shall be stockpiled or used as directed by the Departmental Representative.
- .5 The Contractor will be permitted to set up a Mobile Asphalt Plant or use a Stationary Asphalt Plant for this Project at David Thompson Pit in Banff National Park.
  - .1 The asphalt plant to be used on this project, regardless of location, shall be a minimum of 200 tonnes per hour production, equipped with a dry bag system for pollution control, in addition to, or in replacement of standard cyclone dust collectors, to effectively eliminate emissions of dust and smoke pollutants into the atmosphere.
  - .2 There is no power available at David Thompson Pit.
- .6 No water is available in David Thompson Pit either directly or through exposing the submerged water table. The Contractor is responsible for sourcing water required for the Works and may be required to obtain it from outside of the National Parks. Accessing local water sources in nearby pits or from other Parks facilities can be coordinated through the Departmental Representative and the ESO but will require the Contractor to obtain a Restricted Access Permit and to adhere to all conditions contained therein.
- .7 In preparation for and during construction of this project, an “Environmental Protection Plan” (EPP) is to be prepared by the Contractor to meet the requirements of Section 01 35 43 – Environmental Procedures to ensure the desired minimal adverse effects are achieved. The Contractor’s EPP must be approved by Parks Canada Agency prior to the commencement of construction. The Departmental Representative and Parks Canada’s Environmental Surveillance Officer (ESO) will refer to the approved EPP in determining compliance with the Plan and Contract Documents. The EPP will form part of the Contract.
- .8 Where material and construction specifications for work covered under the Contract, including any Change Orders are not available, AT - Standard Specifications for Highway Construction (latest edition) shall apply unless directed otherwise by the Departmental Representative.

## 1.5 CONTRACT METHOD

- .1 Construct Work under combined price Contract.

## 1.6 WORK BY OTHERS

- .1 The Contractor is advised that the following Work is anticipated along Hwy 93N in 2019:
  - .1 Hwy 93N Paving Km 93-116
  - .2 Hwy 93N Paving Km 121-151
  - .3 Hwy 93N Rock Scaling Km 131-132
  - .4 Hwy 93N Paving Km 151-175
  - .5 Other projects and maintenance work may occur along Hwy 93N in 2019
- .2 Where it is necessary that work is to proceed in areas of this project common to both the Contractor and forces of others, the Contractor shall cooperate with the other Contractors and the PCA Departmental Representative in reviewing their construction schedules and sharing their work space, and shall coordinate their operations with the other Contractors, including traffic management, construction staging and site safety. No claim from the Contractor shall be made for any delays.
- .3 The Contractors shall coordinate all work on this project with other Contractors including Site Safety and Traffic Control.
- .4 The borrow, staging areas and pits mentioned in the Contract Documents are operational and are used by many contractors and Parks Canada. The Contractor shall coordinate and cooperate with the other users of the applicable areas.

## 1.7 WORK SEQUENCE

- .1 Schedule work progress to allow Owner / Departmental Representative unrestricted access to inspect all phases of the Work.
- .2 Maintain fire and emergency access on the roadways at all times.
- .3 Co-ordinate Work with other Contractors / Departmental Representatives doing maintenance, survey / testing work.
- .4 The Contractor shall prepare a meaningful bar chart or network diagram showing the proposed schedules of major work, which shall be submitted to the Departmental Representative in accordance with Section 01 32 16 - Construction Progress Schedules.
- .5 The Contractor shall:
  - .1 **Complete all clearing before April 21, 2019.**
  - .2 **Construct and commission the two-lane paved detour no later than June 27, 2019.**
  - .3 **Begin culvert construction no earlier than July 2, 2019.**
  - .4 **Obtain the Interim Certificate (Substantial Performance) by August 17, 2019.**
  - .5 **Complete all of the Work by August 31, 2019 (Contract Completion Date).**
  - .6 Demobilize from site if at any time, the relevant area is declared to be at risk of being impacted by an avalanche or debris flow.
    - .1 Although no guarantee is provided as to when this may occur, in the past it has been after mid-October until June 1.
  - .7 Remobilize to site only when the relevant area is declared to not be at risk of being impacted by an avalanche.

- .1 Although no guarantee is provided as to when this may occur, in the past it has been after June 1.

## **1.8 CONTRACTOR USE OF PREMISES**

- .1 Contractor has unrestricted use of site subject to Section 01 14 00 –Work Restrictions and Section 01 29 01 – Site Occupancy, until Contract Completion date. The Contractor's use of the site is not exclusive of other contractors or work zones within the limits of this Contract.
- .2 Contractor shall limit use of premises for Work, for storage, and for access, to allow:
  - .1 Owner occupancy.
  - .2 Work by other Contractors.
- .3 Coordinate use of premises under direction of the Departmental Representative.
- .4 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .5 The Contractor and any subcontractors shall obtain a business license and vehicle work passes in accordance with Section 01 35 43 - Environmental Procedures.

## **1.9 OWNER OCCUPANCY**

- .1 Owner will occupy premises during entire construction period for execution of normal operations.
- .2 Cooperate with Owner in scheduling operations to minimize conflict and to facilitate Owner usage.
- .3 Contractor must allow access to the Work Site for other Contractors and PCA. It is up to the Contractor to plan their work accordingly.

## **1.10 OWNER FURNISHED ITEMS**

- .1 Notify the Departmental Representative immediately of any Owner supplied items which may be unfit for purpose.
- .2 Owner-supplied precast concrete barriers are available for temporary Contractor use in David Thompson Pit and Niblock Pit. No additional payment will be made if the Contractor chooses to use owner-supplied barriers for the detour.
- .3 Material is available for excavation and aggregate crushing at David Thompson Pit, which the Contractor may use on this Project only. Approximate quantities are shown on the David Thompson Pit plan. The Contractor is responsible for verifying these quantities prior to use. The Contractor is also responsible for all handling, stockpiling and testing of the Owner-supplied material related to aggregate production.
- .4 Gravel fill material is available at David Thompson Pit, which the Contractor may use for detour construction and culvert backfill on this Project only. Approximate quantities are shown on the David Thompson Pit plan. The Contractor is responsible for verifying these quantities prior to use. The Contractor is also responsible for all handling, stockpiling and testing of the owner-supplied material related to aggregate production.

## **1.11 CONSTRUCTION SIGNAGE**

- .1 To be in accordance with Section 01 35 31 - Special Procedures for Traffic Control.
- .2 Signage shall be coordinated with other Contractors.

- .3 No signs or advertisements, other than warning signs, are permitted on site.

## 1.12 SETTING OUT OF WORK

- .1 Departmental Representative will establish control points and provide:
- .1 Detailed cross-section templates showing design centreline and shoulder grades.
  - .2 Complete set of construction Drawings.
  - .3 Alignment notes showing curve data and control point coordinates.
  - .4 Provide a list of control monuments including coordinates and elevations on request.
  - .5 Measurements for Payment (Quantity Surveys) and volumes by the surface to surface prismatic method for roadway and drainage excavation and neat line for all surfaces above the excavated surface at a maximum of 20m intervals. Coordinates unless otherwise stated are UTM Grid and no adjustments will be made to scale the coordinates to ground when calculated volumes by cross-section or setting out of work.
- .2 Contractor shall:
- .1 Not permanently mark any infrastructure or feature during their setting out of the work. They shall fully remove any set out marks, markers, or other identifiers that they installed, prior to demobilizing from the Work Sites.
  - .2 Set additional control points as necessary.
  - .3 Set all work stakes necessary to complete work.
  - .4 Allow sufficient time for Departmental Representative to take measurements for payment.
  - .5 Not damage geodetic benchmarks or control monuments unless authorized by Departmental Representative.
- .3 No separate payment for setting out work, unless changes are made and approved by the Departmental Representative and additional survey costs are incurred. Payment for additional survey required due to changes by Departmental Representative to be paid for as part under **“Lump Sum Price Item 3– Prime Cost Sum”**.

## Part 2 Products

- .1 To be in accordance with BC MoTI Standard Specifications for Highway Construction (latest edition) where geometrics are concerned, otherwise AT - Standard Specifications for Highway Construction (latest edition).

## Part 3 Execution

- .1 To be in accordance with BC MoTI Standard Specifications for Highway Construction (latest edition) where geometrics are concerned, otherwise AT - Standard Specifications for Highway Construction (latest edition).

**END OF SECTION**