

## General

### **1.1. SECTION INCLUDES**

- .1 Title and description of Work.
- .2 Project location.
- .3 Contract Method.
- .4 Work by others.
- .5 Work schedule.
- .6 Contractor use of premises.
- .7 Owner occupancy.
- .8 Owner furnished items.

### **1.2. PRECEDENCE**

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

### **1.3. DEFINITIONS**

- .1 Alberta Transportation is referred to as “AT”

### **1.4. RELATED SECTIONS**

- .1 Section 01 29 01 - Site Occupancy.
- .2 Section 01 33 00 Submittal Procedures.

### **1.5. PROJECT DESCRIPTION**

- .1 The project work is for The Valley of the Five Lakes trail head and parking lot. The work in this contract and as detailed on the plans and specifications shall provide for a rehabilitation of portions of the hiking Trail 9a at the trailhead, and enlargement and reconstruction of the parking lot and day use. The parking lot will be an asphalt paved parking area constructed over a gravel base. The day use area will include separate picnic tables on gravel pads, gravel trails, trash bins and a new privy.
- .2 In preparation for and during construction of this project, an “Environmental Protection Plan” (EPP) is to be prepared by the successful 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 (PCA) 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 specifications. The EPP will form part of the contract.

- .3 This project has been subject to an environmental assessment - "Basic Impact Analysis, Valley of the Five Lakes Parking Lot Expansion" by Avens Consulting dated March 2016
- .4 The Contractor shall provide all material except as otherwise noted, equipment, and labor to reconstruct the hiking trail which includes the following:
- .5 Clearing and grubbing for new trail sections, to be 2.2m wide or width as indicated on the plans
- .6 Construction of new gravel trail, to be 1.5m wide or width as indicated on the plans

#### **1.6. PROJECT LOCATIONS**

- .1 The project is located at the Valley of the Five Lakes trailhead, which is located along the Icefield Parkway (93N), 8.8 km south of the intersection with Highway 16.
- .2 The project gravel material source is at the Marmot gravel pit, which is located off the highway 93A. It is approximately 3.5 km distance along the road to the Marmot pit from the Valley of the Five Lakes trailhead.

#### **1.7. CONTRACT METHOD**

- .1 Construct Work under combined price contract.

#### **1.8. CONTRACTOR'S DUTIES**

- .1 Any Contractor's material and equipment requiring storage on site will be located in an area as approved by Parks Canada.
- .2 Contractor to promptly inspect delivered products, report damaged or defective items; give written receipt for items accepted in good order.
- .3 Repair or replace items damaged as a result of the Contractor's operations.
- .4 Install, connect and finish products as specified.

#### **1.9. WORK SCHEDULE**

- .1 Within 7 days of award of contract, submit construction schedule of work, indicating anticipated progress stages within time on completion as shown on Tender Document. Do not commence work before schedule is submitted and approved.
- .2 When schedule has been approved by the Departmental Representative, take necessary measures to complete the work within the scheduled time. Do not change the schedule without the Departmental Representative's approval.
- .3 Work on the parking lot is to commence after 20 August 2016 at the earliest so as not to interfere with nesting birds.
- .4 All work to be completed under this contract by 31 October 2016.

**1.10. WORK BY OTHERS**

- .1 The Contractor is advised that the following Work in the vicinity has been or will be contracted by Parks Canada:
  - .1 Turning lane for the Parking Lot at Valley of Five Lakes Trail. This work may or may not be completed before commencement of the work under this contract. If not completed, then coordinate work Department Representative to allow access to the completed parking lot.
- .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 Owner in reviewing their construction schedules, sharing his work space, and shall coordinate his operations with the other Contractors, including traffic management.
- .3 The Contractor who is awarded this Contract shall be the Prime Contractor at the Valley of the Five Lakes Parking Lot for Site Safety and Traffic Control. Work done by other Contractors in the Icefield Parkway right of way will need to be coordinated between the different contractors and Parks Canada so the Contractor shall cooperate with direction from the Parks Canada representative.

**1.11. SPECIAL REQUIREMENTS**

- .1 Contractor to take directives from the Departmental Representative. Directives from other Parks Canada Agency employees are not be followed unless otherwise specified by the Departmental Representative.

**1.12. COST BREAKDOWN**

- .1 Before submitting the first progress claim, submit a breakdown of contract prices in detail and aggregating contract price as directed by the Departmental Representative. After approval by the Departmental Representative, cost breakdown will be used as a basis for progress payment. The unit price table for the separate improvement areas will be used as a guide to developing the cost breakdown.
- .2 See Section 012100 for Method of Measurement and Basis of Payment.

**1.13. CONTRACTOR'S USE OF SITE**

- .1 Contractor has unrestricted use of site, subject to Section 01 14 00 and Section 01 29 01, until Contract Completion date.
- .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 from the Jasper National Parks Visitor Information Center in the Town of Jasper, prior to commencement of the contract.
- .6 All Contractor's business and private vehicles are required to display a vehicle work pass from Parks Canada. These permits may be obtained free of charge from PCA Environmental Surveillance Officer or as directed by the Departmental Representative.

#### **1.14. OWNER OCCUPANCY**

- .1 Owner may need to occupy premises from time to time during entire construction period for execution of emergency operations such as fire suppression or cases of emergency.
- .2 Cooperate with Owner in scheduling operations to minimize conflict and to facilitate Owner usage.

#### **1.15. OWNER FURNISHED ITEMS**

- .1 The following materials are available to the Contractor in stockpiles at Marmot Gravel Pit:
  - .1 75 mm minus granular materials aggregate for backfill purposes.
  - .2 20m minus granular material for granular base course/
  - .3 10 mm minus granular material for Granular trail surface course.
  - .4 Landscape boulders
- .2 Native topsoil is available from the materials removed from the area of the Valley of the Five Lakes parking lot.
- .3 Directional trail signs to be installed by the Owner on Contractor supplied and installed posts.
- .4 Panabode privy building and underground storage tank will be supplied by owner
- .5 Log Benches to be supplied by owner
- .6 Sign posts for trail directional Signs to be supplied by owner.
- .7 Bear proof trash cans to be supplied by owner

#### **1.16. CONSTRUCTION SIGNAGE**

- .1 No signs or advertisements, other than warning signs, are permitted on site.
- .2 Signs and notices for safety and instruction shall be in both official languages. Graphic symbols shall be diamond grade and shall conform to CAN3-Z321.
- .3 Maintain approved signs and notices in good condition for duration of project, and dispose of off-site on completion of project or earlier if directed by the Departmental Representative.

#### **1.17. SETTING OUT OF WORK**

- .1 Departmental Representative will establish control points and provide:
  - .5 Initial set of trail centreline location stakes.

- .6 Complete set of construction Drawings.
- .7 Measurements for Payment (Quantity Surveys).
  
- .2 Contractor to:
  - .1 Set additional control points as necessary.
  - .2 Set all work stakes necessary to complete work.
  - .3 Allow sufficient time for Departmental Representative to take measurements for payment and on site clarifications of design.
  - .4 Not damage geodetic benchmarks unless authorized by Departmental Representative.
  
- .3 No separate payment for setting out work, unless Departmental Representative adjusts alignment in field and additional survey costs are incurred. Payment for additional survey required due to changes by Departmental Representative to be paid for as part of Prime Cost Sum.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Existing services
- .2 Use of the work site.
- .3 Work conducted over or adjacent to waterways
- .4 Access to adjacent properties.
- .5 Utilities.
- .6 Survey of existing property conditions
- .7 Protection of persons and property.
- .8 Use of public areas.
- .9 Supervisory personnel
- .10 Meetings.
- .11 Waste disposal
- .12 Work stoppage

### **1.2. PRECEDENCE**

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

### **1.3. RELATED SECTIONS**

- .1 Section 01 11 00 – Summary of Work.
- .2 Section 01 35 43 - Environmental Procedures.

### **1.4. EXISTING SERVICES**

- .1 Provide for pedestrian and vehicular traffic for the duration of the construction

### **1.5. USE OF THE WORK SITE**

- .1 The Work Site (limits shown on Drawings) shall be specified by Parks Canada and shall only be used for the purposes of the Work. The Work Site will be made available by Parks Canada to the Contractor for its non-exclusive use for the duration of the Work, unless otherwise provided in the Contract Documents.

- .2 Contractor may not establish a construction camp in the Site Location and the Contractor must make Private Accommodation Arrangements. Office-tool trailer may be set up at the Trail Route Area subject to the Departmental Representatives Directions. See Section 01 35 43 - Environmental Procedures.
- .3 The Contractor shall keep the Work Site clean and free from accumulation of waste materials and rubbish regardless of source. Snow shall be removed by the Contractor as necessary for the performance and inspection of the Work.
- .4 The Contractor shall provide sanitary facilities for work force in accordance with governing regulations and the Environmental Procedures for this project. The Contractor shall post notices and take such precautions as required by local health authorities and keep area and premises in sanitary condition.
- .5 Any damage to the Work Site caused by the Contractor shall be repaired by the Contractor at its expense.
- .6 Work schedule can be up to 7 days a week, between the hours of 7:00 AM and 7:00 PM, inclusive of Holidays.
  - .1 No hauling of material during inclement weather.
  - .2 No stoppage of pedestrian, bike, or vehicle traffic on the Icefield Parkway will be allowed for the period commencing at 07:00 a.m. on the day before a Statutory Holiday or long weekend to 7:00 a.m. on the day following a long weekend.

#### **1.6. WORK CONDUCTED OVER OR ADJACENT TO WATERWAYS**

- .1 All components of the Work shall be conducted in accordance with Section 01 35 43 - Environmental Procedures and the Environmental Protection Plan prepared for the project.
- .2 All waste materials from the Work shall be contained and collected in a manner to prevent any contact with the river valleys and waterways. All collected waste materials shall be disposed of in accordance with Section 01 35 43 - Environmental Procedures and the Environmental Protection Plan prepared for the project.
- .3 The Contractor is responsible for the development and supply of construction access to the Work as approved by the Departmental Representative.

### **1.7. ACCESS TO ADJACENT PROPERTIES**

- .1 Construction operations shall be conducted so as to cause minimal inconvenience to the public and to owners of adjoining property. Existing access to property shall be maintained as far as possible and if new access must be provided, every effort shall be taken to provide the new access before the existing access is removed.

### **1.8. UTILITIES**

- .1 There are active utilities within the Icefield Parkway right-of-way with the Fibre Optics Buried Line, located within the existing highway ditch areas.
- .2 The locations of Utilities, if any, shown on the Drawings are not necessarily exact nor is there any guarantee that all Utilities in existence within the limits of the Work Site have been shown on the Drawings.
- .3 If it is determined by the Departmental Representative that Utilities affected by the permanent Work will be relocated by Other Contractors, the Contractor shall co-operate and coordinate as required with Other Contractors engaged in Utility relocation operations on the Work Site.
- .4 The Contractor shall establish and maintain direct and continuous contact with the owners or operators of any Utilities which may interfere with the Work. The Contractor shall co-operate with them at all times and in all places of Work. The Contractor shall keep the Departmental Representative informed of all communications with the Utility companies and authorities.
- .5 The Contractor shall notify the Departmental Representative and the Utility companies at least seven Days in advance of any activities which may interfere with the operation of such Utilities.
- .6 Whenever working in the vicinity of Utilities, the Contractor shall locate such Utilities and expose those that may be affected by the Work, using hand labour as required.
- .7 The Contractor shall assess the possible impact of its operations on all Utilities that may be affected by its operations, and shall protect, divert, temporarily support or relocate, or otherwise appropriately treat such Utilities to ensure that they are preserved.
- .8 The Contractor shall immediately report any damage to Utilities to the Departmental Representative and to the Utility company or authority affected, and shall promptly undertake such remedial measures as are necessary at no additional cost to the Owner.

### **1.9. SURVEY OF EXISTING PROPERTY CONDITIONS**

- .1 Submission of tender is deemed to be confirmation that the Contractor has inspected the site and is conversant with all conditions affecting execution and completion of work.
- .2 The Contractor shall regularly monitor the condition of the Work Site and of property on and adjoining the Work Site throughout the construction period, and shall immediately notify the Owner if any deterioration in condition is detected. Such monitoring shall cover all pertinent

features and property including, but not limited to, buildings, structures, roads, walls, fences, slopes, sewers, culverts and landscaped areas.

- .3 The Departmental Representative may, but shall not be obligated to, survey and record the condition of the Work Site and of property on or adjoining the Work Site prior to the commencement of construction by the Contractor. If requested, the Departmental Representative will provide a copy of the survey records to the Contractor for reference.
- .4 Whenever supplied with survey records, the Contractor shall satisfy itself as to the accuracy and completeness of the survey records provided by the Departmental Representative for any area before commencing construction in that area. Commencement of construction in any area shall be interpreted to signify that the Contractor has accepted such survey records as being a true record of the existing conditions prior to construction.
- .5 The provision of the records of a survey of existing conditions by the Departmental Representative shall in no way limit or restrict the Contractor's responsibility to exercise proper care to prevent damage to all property within or adjacent to the Work Site, whether all such property is covered by the survey or not.

#### **1.10. PROTECTION OF PERSONS AND PROPERTY**

- .1 The Contractor shall comply with all applicable safety regulations of the Workers' Compensation Board of Alberta (WCB) including, but not limited to, WCB's Industrial Health and Safety Regulations, Industrial First Aid Regulations, and Workplace Hazardous Materials Information System Regulations.
- .2 The Contractor shall take all necessary precautions and measures to prevent injury or damage to persons and property on or near the Work Site.
- .3 The Contractor shall promptly take such measures as are required to repair, replace or compensate for any loss or damage caused by the Contractor to any property or, if Parks Canada so directs, shall promptly reimburse to Parks Canada the costs resulting from such loss or damage.

#### **1.11. USE OF PUBLIC AREAS**

- .1 Off-road construction equipment will not be allowed on the existing Icefield Parkway. Steel tracked equipment with cleats will not be allowed on pavement designated for future use. Asphalt, granular, Embankment and excavation materials may be hauled on existing highway but this shall be by standard highway trucks not exceeding legal highway load limits.
- .2 The Contractor shall ensure that its vehicles and equipment do not cause nuisance in public areas. All vehicles and equipment leaving the Work Site and entering public roadways shall be cleaned of mud and dirt clinging to the body and wheels of the vehicle. All vehicles arriving at or leaving the Work Site and transporting materials shall be loaded in a manner which will prevent dropping of materials or debris on the roadways, and where contents may otherwise be blown off during transit such loads shall be covered by tarpaulins or other suitable covers. Spills of materials in public areas shall be removed or cleaned immediately by the Contractor at no cost to the Owner. All activities shall be in accordance with Section

01 35 43 - Environmental Procedures and the Environmental Protection Plan prepared for the project.

#### **1.12. SUPERVISORY PERSONNEL**

- .1 Within five Days after award notification, the Contractor shall submit to the Departmental Representative confirmation of the names of the supervisory personnel and other key staff designated for assignment on the Contract. The following personnel shall be included in the list:
  - .1 Project Superintendent;
  - .2 Safety Representative.
- .2 The above personnel shall perform the following duties:
  - .1 The Project Superintendent shall be employed full time and shall be present on the Work Site each and every workday that Work is being performed, from the commencement of Work to Total Performance of the Work;
  - .2 The Project Superintendent shall nominate a Deputy Project Superintendent who shall have the authority of the Project Superintendent during the latter's absence;
  - .3 The Safety Representative shall possess safety experience in general construction. Duties shall encompass all matters of safety activities from commencement of Work until the Total Performance of the Work.

#### **1.13. MEETINGS**

- .1 The Work includes attending meetings between the Contractor and the Departmental Representative. The meetings will be called and chaired by the Departmental Representative as required. The Contractor shall be represented at such meetings to the satisfaction of the Departmental Representative.
- .2 The Departmental Representative will schedule an initial meeting to be held on site after award notification. Senior representatives of the Owner, Departmental Representative, Contractor, major Subcontractors, field inspectors and supervisors are to be in attendance.
- .3 The Contractor will be requested to assemble his site staff and sub-contractors for an environmental briefing to be conducted by Parks Canada. The briefing shall be of approximately 2 hours in duration and held at initial project start-up. The Contractor shall ensure that all his current project staff is in attendance. The Departmental Representative and the Contractor will co-operate in setting the most appropriate time and place for the briefing. Subsequent to the initial environmental briefing, briefings will be arranged for new staff and sub-contractors showing up on the project.
- .4 Cost of attending the above meetings shall be considered incidental to the Unit Price items and no additional payment will be made.

#### **1.14. WASTE DISPOSAL**

- .1 All unsuitable waste materials shall be removed from the job site to approved sites outside Jasper National Park. Refer to Section 01 35 43 - Environmental Procedures and Environmental Protection Plan.
- .2 Deposits of any construction debris into any waterway is strictly forbidden.
- .3 Cost for Waste Disposal described above shall be considered incidental to the Unit Price items and no additional payment will be made.
- .4 Waste Disposal shall be completed in accordance with Section 01 35 43 - Environmental Procedures.

#### **1.15. WORK STOPPAGE**

- .1 Give precedence to safety and health of public and site personnel and protection of the environment over cost and schedule considerations for Work.

### **Part 2. Products**

#### **2.1. NOT USED.**

### **Part 3. Execution**

#### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Tender Bid Items
- .2 Measurement Procedures
- .3 Payment Methods
- .4 Prime Cost Sum.

### **1.2. REFERENCES**

- .1 General Conditions.

### **1.3. RELATED SECTIONS**

- .1 Section 01 11 00 – Summary of Work.

### **1.4. BASIS OF PAYMENT**

- .1 The work under this contract has been broken into separate bid items. Each bid item has a separate work description and separate bid item unit quantities. In order to monitor costs and pay for materials supplied and installed by the Contractor, a Schedule of Quantities has been established for this contract.
- .2 The Schedule of Quantities contains each bid item used in this contract, and the estimated quantity for this item. The base bid item quantities represents the sum of each item in the Schedule of Quantities.
- .3 Claims must be made for deviations from the estimated bid quantities prior to the installation of the material by the Contractor. The Parks Canada Agency is not responsible for overage of the estimated quantities if this overage has not been approved by the Departmental Representative.
- .4 Deviations of the installed quantities from the base bid amounts of each item are to be verified by the Departmental Representative prior to the Contractor receiving payment. Any approved excess in bid item quantities are subject to survey and/or other verification prior to payment.

### **1.5. BID ITEM MEASUREMENT**

- .1 The Bid Items as listed in sub paragraphs .2 through .5 will be paid as indicated and as listed in the Unit Price Table. Other items included as part of the Contract work and not listed below, will be paid as part of the bid lump sum price.
- .2 Trail Base Preparation
  - .1 Payment for trail base preparation shall be unit price for base preparation, times the unit quantity acceptably prepared.
  - .2 The Contract price shall be full compensation for removal of stumps, rocks, and organic material. The price shall include grading and compacting of sub-base, clearing for a vertical

limit of 3.5m, and 0.5m horizontal distance from the trail edge, and any incidental work thereto for which separate payment has not been identified.

.3 Trail Surface Material

- .1 Payment for trail surface course shall be unit price for surface course, times the unit quantity in square meters acceptably installed.
- .2 Measurement of quantity installed will be by the width of surface course installed per the construction plans, multiplied by the length of surface course installed as measure in the field along the centerline of the trail.
- .3 The contract unit price shall be the price per square meter installed, and be full compensation for preparation and mixing of the base material, loading, hauling, placing and compacting the material, and any other work incidental thereto for which separate payment has not been identified elsewhere.

.4 Abandoned Trail Restoration

- .1 Payment for abandoned trail restoration shall be unit price for abandoned trail restoration, times the unit quantity in square meters acceptably installed.
- .2 The quantity of abandoned trail restoration installed shall be the square meters installed and accepted, as measured along the top of the abandoned trail restoration.
- .3 The contract unit price shall be the price per square meter installed, and be full compensation for preparation of the native material, loading, hauling, placing and compacting the topsoil and leaf litter material, and any other work incidental thereto for which separate payment has not been identified elsewhere.

.5 Asphalt Concrete Base Course

- .1 Payment for asphalt concrete base course shall be unit price for base course, times the unit quantity in square meters acceptably installed.
- .2 The quantity of asphalt concrete base course installed shall be the square meters installed and accepted, as measured along the top of the base course material. The limits of the payment area of base course material shall be as shown on the contract drawings.
- .3 The contract unit price shall be the price per square meter installed, and be full compensation for preparation of the subbase material, loading, hauling, placing and compacting the base course material, and any other work incidental thereto for which separate payment has not been identified elsewhere.

.6 Asphalt Concrete Pavement

- .1 Payment for asphalt concrete pavement shall be unit price for asphalt concrete paving material, times the unit quantity in square meters acceptably installed.
- .2 The quantity of asphalt paving installed shall be the square meters installed and accepted, as measured along the top of the pavement.
- .3 The contract unit price shall be the price per square meter installed, and be full compensation for preparation of the base material, loading, hauling, placing and compacting the asphalt concrete material, and any other work incidental thereto for which separate payment has not been identified elsewhere.

.7 Topsoil Placement and Grading

- .1 Payment for Topsoil Placement and Grading shall be unit price for Topsoil Placement, times the unit quantity in cubic meters acceptably installed.

- .2 The quantity of Topsoil Placement installed shall be the cubic meters installed and accepted, using the average end area method, and as measured along the top of the topsoil placed.
  - .3 The contract unit price shall be the price per cubic meter installed, and be full compensation for preparation of the native material, loading, hauling, placing and compacting the topsoil, and any other work incidental thereto for which separate payment has not been identified elsewhere.
- .8 Seeding
- .4 Payment for seeding shall be unit price for seeding, times the unit quantity in square meters acceptably installed.
  - .5 The quantity of seeding installed shall be the square meters installed and accepted, as measured in plan view.
  - .6 The contract unit price shall be the price per square meter installed, and be full compensation for preparation of the seedbed, hauling, placing, maintaining until Final Acceptance and any other work incidental thereto for which separate payment has not been identified elsewhere.
- .9 Transplanted Conifers and Shrubs
- .7 Payment for Transplanted Conifers and Shrubs shall be unit price for each plant type listed in the Unit Price Table, times the unit quantity of each plant type.
  - .8 The quantity of Transplanted Conifers and Shrubs installed shall be the number of plants transplanted and accepted.
  - .9 The contract unit price shall be the price per each unit installed, and be full compensation for legally sourcing, permits, harvesting, reclaiming areas impacted by harvesting, transporting, installing, pruning and maintaining until Final Acceptance.
- .10 Miscellaneous Improvements
- .1 Payment for miscellaneous improvements will be per cost of material installed, plus labor. The cost sum established in the Unit Price Table is not a sum due the Contractor, but is an amount established against which the Contractor is paid for extra work not within the scope or outside the limits of the Unit Price Table items in Paragraph **Error! Reference source not found.** of this Section.
  - .2 Payment for items under Miscellaneous Improvements will only be for work previously approved by the Departmental Representative in writing. Do not proceed with work under this item without previous approval.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .4 Coordination of the Work
- .5 Progress meetings
- .6 Construction organization and start-up
- .7 Submittal schedule
- .8 Construction progress meetings
- .9 On-site documents
- .10 Schedules
- .11 Submittals
- .12 Close out procedures.

### **1.2. RELATED SECTIONS**

- .13 Section 01 11 00 - Summary of Work.
- .14 Section 01 14 00 – Work Restrictions.
- .15 Section 01 32 18 - Progress Schedule
- .16 Section 01 33 00 Submittal Procedures.
- .17 Section 01 35 43 - Environmental Procedures.
- .18 Section 01 45 00 – Quality Control
- .19 Section 01 52 00 - Construction Facilities.
- .20 Section 01 77 00 – Close out Procedures
- .21 Section 01 78 00 – Close out Submittals

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment.

### **1.4. COORDINATION**

- .2 Perform coordination of progress schedules, submittals, and use of site, temporary utilities, construction facilities, and construction Work, with progress of Work of other Contractors, and Work by Owner, under instructions of the Departmental Representative.

### **1.5. PROJECT MEETINGS**

- .1 Attend weekly project meetings throughout progress of Work and provide information as determined by the Departmental Representative.
- .2 Attend pre-installation meetings when specified in sections and when required to coordinate related or affected Work and provide information as determined by the Departmental Representative.
- .3 Provide physical space and make arrangements for meetings.

### **1.6. CONSTRUCTION ORGANIZATION AND START UP**

- .1 Within seven (7) days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Senior representatives of the Owner, Departmental Representative, Contractor, major Subcontractors, field inspectors and supervisors are to be in attendance.
- .3 Agenda to include following:
  - .1 Appointment of official representative of participants in Work.
  - .2 Schedule of Work, progress scheduling in accordance with Section 01 32 18
  - .3 Schedule of submittals in accordance with Section 01 33 00
  - .4 Requirements for temporary facilities, offices, storage sheds, utilities, fences in accordance with Section 01 52 00.
  - .5 Site safety and security in accordance with Sections 01 14 00, 01 52 00 and 01 35 43
  - .6 Quality Control in accordance with Section 01 45 00
  - .7 Proposed changes, change orders, procedures, approvals required mark up percentages permitted, time extensions, overtime, and administrative requirements.
  - .8 Owner-furnished materials.
  - .9 Monthly progress claims, administrative procedures, photographs, and holdbacks.
  - .10 Close out procedures and submittals in accordance with Sections 01 77 00 and 01 78 00.
  - .11 Insurances and transcript of policies.
  - .12 Other business

- .4 Comply with Departmental Representative's allocation of mobilization areas of site; for field offices and sheds, for access, traffic, and parking facilities.
- .5 During construction, coordinate use of site and facilities through Departmental Representative's procedures for intra project communications: Submittals, reports and records, schedules, coordination of Drawings, recommendations, and resolution of ambiguities and conflicts.
- .6 Comply with instructions of the Departmental Representative for use of temporary utilities and construction facilities.
- .7 Coordinate field and layout work with the Departmental Representative.

### **1.7. ON SITE DOCUMENTS**

- .1 Maintain at job site, one copy each of the following:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Reviewed Shop Drawings and mix designs.
  - .5 Change Orders.
  - .6 Other modifications to Contract.
  - .7 Traffic Management Plan.
  - .8 Safety Plan.
  - .9 WHMIS.
  - .10 Environmental Protection Plan.
  - .11 Field test reports.
  - .12 Copy of approved Work schedule and most recent updated schedule
  - .13 Labour conditions and wage schedules.
  - .14 Applicable current editions of municipal regulations and by-laws.

### **1.8. SUBMITTAL SCHEDULE**

- .1 Prepare a schedule of the required submissions and the date the submissions will be made. Include columns for Actual Date of Submission, Review Comments Received, Final Submission and Final Acceptance Received.
- .2 The Owner will not be responsible for any construction delays resulting from delays in submission acceptance if the submittal dates shown in the Submittal Schedule are not achieved.

### **1.9. PROJECT SCHEDULES**

- .1 Submit preliminary construction progress schedule in accordance with Section 01 32 18 to Departmental Representative coordinated with Owner's project schedule.
- .2 After review, revise and resubmit schedule to comply with revised project schedule.
- .3 During progress of Work revise and resubmit as directed by the Departmental Representative.
- .4 In addition to the project schedule, submit weekly schedules to the Departmental Representative showing Work planned for the following week on a day by day basis.

### **1.10. CONSTRUCTION PROGRESS MEETINGS**

- .1 During course of Work prior to project completion, schedule progress meetings weekly.
- .2 Contractor, major subcontractors involved in Work and Departmental Representative are to be in attendance.
- .3 Agenda to include following:
  - .1 Review, approval of minutes of previous meeting.
  - .2 Review environmental issues
  - .3 Review Traffic Control and Emergency response Protocol issues
  - .4 Review site safety and security issues.
  - .5 Review issues as Prime Contractor and co-ordination with other contractors
  - .6 Review of Work progress since previous meeting.
  - .7 Discuss field observations, problems, and conflicts.
  - .8 Review off-site fabrication delivery schedules
  - .9 Review submittal schedules: expedite as required
  - .10 Corrective measures and procedures to regain projected schedule
  - .11 Revisions to construction schedule
  - .12 Review Weekly Progress schedule, during succeeding work period.
  - .13 Review of quality reports since previous meeting
  - .14 Review construction budget: Progress payments, variances from contract
  - .15 Other business.

### **1.11. SUBMITTALS**

- .1 Submit product data to Section 01 33 00 for review for compliance with Contract Documents.
- .2 Submit requests for payment for review, and for transmittal to Departmental Representative.
- .3 Submit requests for interpretation of Contract Documents, and obtain instructions through Departmental Representative.
- .4 Process substitutions through Departmental Representative.
- .5 Process change orders through Departmental Representative.
- .6 Deliver closeout submittals for review and preliminary inspections, for transmittal to Departmental Representative.

### **1.12. CLOSEOUT PROCEDURES**

- .1 Notify Departmental Representative when Work is considered ready for Substantial Performance.
- .2 Accompany Departmental Representative on preliminary inspection to determine items listed for completion or correction.
- .3 Comply with Departmental Representative's instructions for correction of items of Work listed in executed certificate of Substantial Performance.
- .4 Notify Departmental Representative of instructions for completion of items of Work determined in Departmental Representative's final inspection.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 .Precedence
- .2 .Definitions
- .3 .Requirements
- .4 Submittals
- .5 Project milestones
- .6 Master plan
- .7 Project schedule
- .8 Project schedule reporting
- .9 Project meetings

### **1.2. RELATED SECTIONS**

- .1 Section 01 11 00 – Summary of Work
- .2 Section 01 14 00 – Work Restrictions
- .3 Section 01 21 00 - Allowances

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. PRECEDENCE**

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

### **1.5. DEFINITIONS**

- .1 Activity: An element of Work performed during course of Project. An activity normally has an expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (Gantt chart). A graphic display of schedule related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.

- .1 Baseline: Original approved plan for Project, plus or minus approved scope changes.
- .2 Construction Work Week: Monday to Sunday, inclusive, will provide seven day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .3 Duration: Number of work periods (not including holidays or other nonworking periods required to complete an activity or other Project element. Usually expressed as workdays or workweeks.
- .4 Master Plan: A summary level schedule that identifies major activities and key milestones.
- .5 Milestone: A significant event in Project, usually completion of major deliverable.
- .6 Project Schedule: The planned dates for performing activities and the planned dates for meeting milestones. A dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .7 Project Planning, Monitoring and Control System: Overall system operated by Departmental Representative to enable monitoring of project work in relation to established milestones.

## **1.6. REQUIREMENTS**

- .1 Ensure the Project Schedule is practical and remain within specified Contract duration.
- .2 Ensure all the Work required for the Contract is identified in the Project Schedule. Refer to Section 01 11 00 – Summary of Work for a potential list of activities.
- .3 Include an allowance in the schedule for Work performed and paid for as Prime Cost Sum. Refer to Section 01 21 00 – Allowances for a list of activities.
- .4 Plan to complete Work in accordance with prescribed Project Schedule.
- .5 Limit activity durations to maximum of approximately 14 working days, to allow for progress reporting.
- .6 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.
- .7 Include the requirements of Section 01 14 00 -Work Restrictions and Section 01 35 43 – Environmental procedures.

## **1.7. SUBMITTALS**

- .1 Submit to Departmental Representative within 10 working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.

- .2 Submit Project Schedule to Departmental Representative within 10 working days of receipt of acceptance of Master Plan.

### **1.8. PROJECT MILESTONES**

- .1 Project milestones form interim targets for Project Schedule.
- .2 Completion of each Stage of Construction
- .3 Subgrade completion Milestone
- .4 Trail Completion Milestone
- .5 Parking Lot completion
- .6 Interim Certificate (Substantial Completion) \_\_\_\_\_.
- .7 Contract Completion Date \_\_\_\_\_

### **1.9. MASTER PLAN**

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 Departmental Representative will review and return revised schedules within 5 working days.
- .3 Revise impractical schedule and resubmit within 5 working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

### **1.10. PROJECT SCHEDULE**

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
  - .3 Award.
  - .4 Permits.
  - .5 Submittals:
  - .6 Project Schedule
    - .1 List of subcontractors, suppliers and consultants
    - .2 Contractor Chain of Command including Sub-Contractors and consultants
    - .3 Prime Contractor / co-ordination with other contractors Plan
    - .4 Work Plan
    - .5 Environmental Protection Plan
    - .6 Traffic Management Plan
    - .7 Site access / Detour Plan

- .8 Emergency Response Protocol
  - .9 Site Specific Health and Safety Plan, incl. MSDS sheets
  - .10 On site contingency and emergency response plan
  - .11 Material Purchase Plan
  - .12 Management of Owner supplied material Plan
  - .13 Survey Plan
  - .14 Quality Control Plan
  - .15 Shop Drawings
- .7 Work Activities by trail segments / locations:
- .1 Grubbing
  - .2 Stripping
  - .3 Detours / Site Access
  - .4 Subgrade Construction
  - .5 Sub-base material placement
  - .6 Base material placement
  - .7 Organic material placement
  - .8 Site furnishing installation
  - .9 Additional Work as and when requested
  - .10 Quality Control
  - .11 Interim InspectionSite
  - .12 Clean-up / De-mobilization

#### **1.11. PROJECT SCHEDULE REPORTING**

- .1 Update Project Schedule on monthly basis reflecting activity changes and completions, as well as activities in progress. Provide weekly Progress Reports
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

#### **1.12. PROJECT MEETINGS**

- .3 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

### **Part 2. Products**

#### **2.1. NOT USED.**

### **Part 3. Execution**

#### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Administrative.
- .2 Shop drawings and product data.
- .3 Certificates and transcripts.
- .4 Required Contractor Submittals.
- .5 Pre-mobilization Submittals
- .6 Construction Phase Submittals
- .7 .Project Completion Submittals

### **1.2. RELATED SECTIONS**

- .1 Section 01 14 00 - Work Restrictions.
- .2 Section 01 32 18 - Construction Progress Schedules - Bar (Gantt) Chart.
- .3 Section 01 35 30 – Health and Safety Requirements.
- .4 Section 01 35 31 - Special Procedures for Traffic Control and Construction Detours
- .5 Section 01 35 43 - Environmental Procedures.
- .6 Section 01 45 00 – Quality Control.
- .7 Section 01 78 00 - Closeout Submittals.

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. REFERENCES**

- .1 Not used.

### **1.5. ADMINISTRATIVE**

- .1 Submit to Departmental Representative submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Work affected by submittal shall not proceed until review is complete.

- .3 Present shop drawings, product data, samples and mock ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6 Notify Departmental Representative in writing at time of submission, identifying any deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work is consistent.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .10 Keep one reviewed copy of each submission on site.

#### **1.6. SHOP DRAWINGS, PRODUCT DATA AND MIX DESIGNS**

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by the Contractor to illustrate details of a portion of Work.
- .2 The term "mix design" means engineered design for proportioning materials in concrete or asphalt concrete pavement including all supporting test results, materials properties and Departmental Representative's letter of recommendation.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of section under which adjacent items will be supplied and installed. Indicate cross-references to design drawings and specifications.
- .4 Allow fourteen (14) Calendar days for Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings by the Departmental Representative are not intended to change the Contract Price. If adjustments affect the value of Work, state such in writing to the Departmental Representative prior to proceeding with the Work.
- .6 Make changes in shop drawings as the Departmental Representative may require, consistent with the Contract Documents. When resubmitting, notify the Departmental Representative in writing of any revisions other than those requested.

- .7 Submit letter(s) of certification with all mix designs.
- .8 Accompany submissions with a transmittal letter containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing mix design, product and sample.
  - .5 Other pertinent data.
- .9 Submissions shall include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name and address of:
    - a. Subcontractor,
    - b. Supplier,
    - c. Manufacturer.
    - d. Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with the Contract Documents.
  - .4 Details of appropriate portions of the Work as applicable:
    - a. Fabrication,
    - b. Performance characteristics,
    - c. Standards.
- .10 After the Departmental Representative's review, distribute copies.
- .11 Submit six (6) prints and one (1) electronic copy of the shop drawings for each requirement requested in the Specification Sections and as requested by the Departmental Representative.
- .12 Submit six (6) copies of the product data sheets or brochures for requirements requested in the Specification Sections and as requested by the Departmental Representative where shop drawings will not be prepared due to standardized manufacture of the product.
- .13 Delete information not applicable to project.
- .14 Supplement standard information to provide details applicable to project.
- .15 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .16 The review of shop drawings by Departmental Representative is for sole purpose of ascertaining conformance with general concept. This review shall not mean that Departmental Representative approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and

correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co ordination of Work of all sub trades.

### **1.7. SAMPLES**

- .1 Not used.

### **1.8. MOCK-UPS**

- .1 Not used.

### **1.9. CERTIFICATES AND TRANSCRIPTS**

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

### **1.10. REQUIRED CONTRACTOR SUBMITTALS**

- .1 General
  - .1 This Clause identifies the plans, programs, and documentation required prior to mobilization on site and during the construction phase.
- .2 Pre-Mobilization Submittals
  - .1 Submit the following plans and programs to the Departmental Representative for review a minimum of twenty (20) days prior to mobilization to the project site. The Contractor shall not begin any site Work until the Departmental Representative has authorized acceptance of the submittals in writing.
  - .2 The Contractor shall not construe the Departmental Representative's authorization of the submittals to imply approval of any particular method or sequence for conducting the Work, or for addressing health and safety concerns. Authorization of the programs shall not relieve the Contractor from the responsibility to conduct the Work in strict accordance with the requirements of Federal or Provincial regulations, this specification, or to adequately protect the health and safety of all workers involved in the project and any members of the public who may be affected by the project. The Contractor shall remain solely responsible for the adequacy and completeness of the programs and work practices, and adherence to them.
  - .3 Project schedule, detailing the schedule of the workdays required from Contractor, subcontractors, suppliers and consultants to complete each activity of the project location in order to meet stages specified in Section 01 11 00. In addition for each activity critical elements that could impact on the schedule to be identified. Submission shall include both a paper copy of the schedule and an electronic copy in Microsoft Projects format.
  - .4 List of subcontractors, suppliers and consultants, their role and their key personnel, including names and positions, addresses, telephone, cellular telephone and/or pager numbers
  - .5 Contractor Chain of Command, listing key Contractor personnel, including for each name, position, qualification, experience, telephone, cellular telephone and/or pager numbers. The list shall include the names and telephone/cellular telephone/pager numbers for contact persons who are available on a 24-hour basis in the event of emergencies.
  - .6 Work Plan, describing in detail for each activity by road segment and location, the Contractor's intended methods of construction, and materials, equipment and manpower he

- will use to meet stages specified in Section 01 11 00. The Work Plan has to be linked to the Project Schedule.
- .7 Quality Control Plan in accordance with Section 01 45 00 – Quality Control.
  - .8 Traffic Management Plan, in accordance with the requirements of Section 01 35 14 - Special Procedures for Traffic Control.
  - .9 Environmental Protection Plans (EPP) and Environmental Construction Operations Plans (ECO Plans) which shall meet the requirements of Section 01 35 43 - Environmental Procedures.
  - .10 Materials Purchase Plan describing the Contractor’s intended methods of getting materials required for this projects in a timely fashion in order to meet stages specified in Section 01 11 00.
  - .11 Management of Owner supplied materials Plan describing the Contractor’s intended methods of reporting to him regularly on quantities used and for what purpose, and on managing materials supplied by the Owner to avoid waste or shortfalls.
  - .12 Survey Plan describing the Contractor’s intended methods of surveying during this project
  - .13 Contractor shall develop an “Emergency Procedures Protocol” in consultation with Parks Canada. Parks Canada will supply the Contractor with a template with contact names and numbers to be used for this purpose.
  - .14 Health And Safety Plan - The Contractor shall have a Certificate of Recognition (COR) or Registered Safety Plan (RSP) including a site specific Health and Safety Plan acceptable to the Departmental Representative. The Contractor shall implement and maintain the Health and Safety Plan per Section 01 35 30 during the Work.
- .3 The Contractor shall not begin any site Work until the Departmental Representative has authorized acceptance of the submittals in writing.
  - .4 Construction Phase Submittals
    - .1 Monthly Progress Reports in accordance with Section 01 32 18.
    - .2 Weekly Progress Reports that outline the detailed Work (Contractor, subcontractors, suppliers, consultants) completed to date as well as the anticipated Work to be performed for the following week on a day-by-day basis. Work to be linked to activities by location identified in project schedule and to provide information on materials, equipment and manpower. Also, alternate Work to be identified if work or a portion of, proposed cannot be done due to weather, equipment breakdown, delays in delivery, etc.
    - .3 Quality Control Inspection Reports - The Contractor shall maintain a daily inspection report that itemizes the results of all Quality Control inspections conducted by the Contractor. The reports shall be made available for review by the Departmental Representative upon request. A summary of all Quality Control inspections conducted to date shall be submitted by the Contractor with each request for payment.
    - .4 Shop Drawings - The Contractor shall submit all shop drawings required to fabricate and / or conduct the work a minimum 30 days prior to fabrication / production.
    - .5 Progress Photographs:
      - a. Format of photographs shall be 200 x 300 mm colour glossy prints, complete with binding edge or in three hole plastic sleeves, and electronic files, png or jpg format, minimum 5.0 megapixels.
      - b. Submission requirements: three sets of five (5) prints and one set of electronic files.
      - c. Identification: typewritten name and number of project, description of photograph and date of exposure on 25 x 50 mm white patch in upper right hand corner.
      - d. Viewpoints determine by Construction Manager or Departmental Representative.

- e. Submission Frequency: prior to commencement of work and weekly thereafter with progress statement, or as directed by Construction Manager or Departmental Representative.
  - f. Submit CD or USB drive with all electronic pictures as part of closeout package.
  - .6 Submit four (4) copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative and authority having jurisdiction, weekly.
  - .7 Submit copies of reports or directions issued by Federal and Provincial health and safety inspectors.
  - .8 Submit copies of incident and accident reports.
- .5 Project Completion Submittals
- .1 Record Drawings -The Contractor shall submit copies of all Contractor's Drawings revised as necessary to record all as-built changes to the Work and the Contractor shall submit a set of Contract Drawings clearly marked to record as-built changes to the Work.
  - .2 Quality Control Records – The Contractor shall submit a bound and itemized set of project quality control.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Administrative.
- .2 Shop drawings and product data.
- .3 Certificates and transcripts.
- .4 Required Contractor Submittals.
- .5 Pre-mobilization Submittals
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- .7 .Project Completion Submittals

### **1.2. RELATED SECTIONS**

- .1 Section 01 14 00 - Work Restrictions.
- .2 Section 01 32 18 - Construction Progress Schedules - Bar (Gantt) Chart.
- .3 Section 01 35 30 – Health and Safety Requirements.
- .4 Section 01 35 31 - Special Procedures for Traffic Control and Construction Detours
- .5 Section 01 35 43 - Environmental Procedures.
- .6 Section 01 45 00 – Quality Control.
- .7 Section 01 78 00 - Closeout Submittals.

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. REFERENCES**

- .2 Not used.

### **1.5. ADMINISTRATIVE**

- .1 Submit to Departmental Representative submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Work affected by submittal shall not proceed until review is complete.

- .3 Present shop drawings, product data, samples and mock ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6 Notify Departmental Representative in writing at time of submission, identifying any deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work is consistent.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .10 Keep one reviewed copy of each submission on site.

#### **1.6. SHOP DRAWINGS, PRODUCT DATA AND MIX DESIGNS**

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by the Contractor to illustrate details of a portion of Work.
- .2 The term "mix design" means engineered design for proportioning materials in concrete or asphalt concrete pavement including all supporting test results, materials properties and Departmental Representative's letter of recommendation.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of section under which adjacent items will be supplied and installed. Indicate cross-references to design drawings and specifications.
- .4 Allow fourteen (14) Calendar days for Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings by the Departmental Representative are not intended to change the Contract Price. If adjustments affect the value of Work, state such in writing to the Departmental Representative prior to proceeding with the Work.
- .6 Make changes in shop drawings as the Departmental Representative may require, consistent with the Contract Documents. When resubmitting, notify the Departmental Representative in writing of any revisions other than those requested.

- .7 Submit letter(s) of certification with all mix designs.
- .8 Accompany submissions with a transmittal letter containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing mix design, product and sample.
  - .5 Other pertinent data.
- .9 Submissions shall include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name and address of:
    - a. Subcontractor,
    - b. Supplier,
    - c. Manufacturer.
    - d. Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with the Contract Documents.
  - .4 Details of appropriate portions of the Work as applicable:
    - a. Fabrication,
    - b. Performance characteristics,
    - c. Standards.
- .10 After the Departmental Representative's review, distribute copies.
- .11 Submit six (6) prints and one (1) electronic copy of the shop drawings for each requirement requested in the Specification Sections and as requested by the Departmental Representative.
- .12 Submit six (6) copies of the product data sheets or brochures for requirements requested in the Specification Sections and as requested by the Departmental Representative where shop drawings will not be prepared due to standardized manufacture of the product.
- .13 Delete information not applicable to project.
- .14 Supplement standard information to provide details applicable to project.
- .15 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .16 The review of shop drawings by Departmental Representative is for sole purpose of ascertaining conformance with general concept. This review shall not mean that Departmental Representative approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and

correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co ordination of Work of all sub trades.

### **1.7. SAMPLES**

- .1 Not used.

### **1.8. MOCK-UPS**

- .1 Not used.

### **1.9. CERTIFICATES AND TRANSCRIPTS**

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

### **1.10. REQUIRED CONTRACTOR SUBMITTALS**

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  - .1 Submit the following plans and programs to the Departmental Representative for review a minimum of twenty (20) days prior to mobilization to the project site. The Contractor shall not begin any site Work until the Departmental Representative has authorized acceptance of the submittals in writing.
  - .2 The Contractor shall not construe the Departmental Representative's authorization of the submittals to imply approval of any particular method or sequence for conducting the Work, or for addressing health and safety concerns. Authorization of the programs shall not relieve the Contractor from the responsibility to conduct the Work in strict accordance with the requirements of Federal or Provincial regulations, this specification, or to adequately protect the health and safety of all workers involved in the project and any members of the public who may be affected by the project. The Contractor shall remain solely responsible for the adequacy and completeness of the programs and work practices, and adherence to them.
  - .3 Project schedule, detailing the schedule of the workdays required from Contractor, subcontractors, suppliers and consultants to complete each activity of the project location in order to meet stages specified in Section 01 11 00. In addition for each activity critical elements that could impact on the schedule to be identified. Submission shall include both a paper copy of the schedule and an electronic copy in Microsoft Projects format.
  - .4 List of subcontractors, suppliers and consultants, their role and their key personnel, including names and positions, addresses, telephone, cellular telephone and/or pager numbers
  - .5 Contractor Chain of Command, listing key Contractor personnel, including for each name, position, qualification, experience, telephone, cellular telephone and/or pager numbers. The list shall include the names and telephone/cellular telephone/pager numbers for contact persons who are available on a 24-hour basis in the event of emergencies.
  - .6 Work Plan, describing in detail for each activity by road segment and location, the Contractor's intended methods of construction, and materials, equipment and manpower he

- will use to meet stages specified in Section 01 11 00. The Work Plan has to be linked to the Project Schedule.
- .7 Quality Control Plan in accordance with Section 01 45 00 – Quality Control.
  - .8 Traffic Management Plan, in accordance with the requirements of Section 01 35 14 - Special Procedures for Traffic Control.
  - .9 Environmental Protection Plans (EPP) and Environmental Construction Operations Plans (ECO Plans) which shall meet the requirements of Section 01 35 43 - Environmental Procedures.
  - .10 Materials Purchase Plan describing the Contractor’s intended methods of getting materials required for this projects in a timely fashion in order to meet stages specified in Section 01 11 00.
  - .11 Management of Owner supplied materials Plan describing the Contractor’s intended methods of reporting to him regularly on quantities used and for what purpose, and on managing materials supplied by the Owner to avoid waste or shortfalls.
  - .12 Survey Plan describing the Contractor’s intended methods of surveying during this project
  - .13 Contractor shall develop an “Emergency Procedures Protocol” in consultation with Parks Canada. Parks Canada will supply the Contractor with a template with contact names and numbers to be used for this purpose.
  - .14 Health And Safety Plan - The Contractor shall have a Certificate of Recognition (COR) or Registered Safety Plan (RSP) including a site specific Health and Safety Plan acceptable to the Departmental Representative. The Contractor shall implement and maintain the Health and Safety Plan per Section 01 35 30 during the Work.
- .3 The Contractor shall not begin any site Work until the Departmental Representative has authorized acceptance of the submittals in writing.
- .4 Construction Phase Submittals
- .1 Monthly Progress Reports in accordance with Section 01 32 18.
  - .2 Weekly Progress Reports that outline the detailed Work (Contractor, subcontractors, suppliers, consultants) completed to date as well as the anticipated Work to be performed for the following week on a day-by-day basis. Work to be linked to activities by location identified in project schedule and to provide information on materials, equipment and manpower. Also, alternate Work to be identified if work or a portion of, proposed cannot be done due to weather, equipment breakdown, delays in delivery, etc.
  - .3 Quality Control Inspection Reports - The Contractor shall maintain a daily inspection report that itemizes the results of all Quality Control inspections conducted by the Contractor. The reports shall be made available for review by the Departmental Representative upon request. A summary of all Quality Control inspections conducted to date shall be submitted by the Contractor with each request for payment.
  - .4 Shop Drawings - The Contractor shall submit all shop drawings required to fabricate and / or conduct the work a minimum 30 days prior to fabrication / production.
  - .5 Progress Photographs:
    - a. Format of photographs shall be 200 x 300 mm colour glossy prints, complete with binding edge or in three hole plastic sleeves, and electronic files, png or jpg format, minimum 5.0 megapixels.
    - b. Submission requirements: three sets of five (5) prints and one set of electronic files.

- c. Identification: typewritten name and number of project, description of photograph and date of exposure on 25 x 50 mm white patch in upper right hand corner.
  - d. Viewpoints determine by Construction Manager or Departmental Representative.
  - e. Submission Frequency: prior to commencement of work and weekly thereafter with progress statement, or as directed by Construction Manager or Departmental Representative.
  - f. Submit CD or USB drive with all electronic pictures as part of closeout package.
- .6 Submit four (4) copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative and authority having jurisdiction, weekly.
- .7 Submit copies of reports or directions issued by Federal and Provincial health and safety inspectors.
- .8 Submit copies of incident and accident reports.
- .5 Project Completion Submittals
- .1 Record Drawings -The Contractor shall submit copies of all Contractor's Drawings revised as necessary to record all as-built changes to the Work and the Contractor shall submit a set of Contract Drawings clearly marked to record as-built changes to the Work.
  - .2 Quality Control Records – The Contractor shall submit a bound and itemized set of project quality control.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Precedence
- .2 Measurement procedures.
- .3 National Park regulations.
- .4 Canadian Environmental Assessment Act (CEAA).
- .5 Start-up and environmental briefing.
- .6 Site access and parking.
- .7 Erosion control
- .8 Pollution control
- .9 Equipment maintenance, fuelling and operation
- .10 Operation of equipment
- .11 Fire prevention and control
- .12 Wildlife
- .13 Relics and antiquities.
- .14 Waste materials storage and removal
- .15 Miscellaneous site management contingencies

### **1.2. RELATED SECTIONS**

- .1 All Divisions 01, 02 and 03 Sections

### **1.3. PRECEDENCE**

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

### **1.4. MEASUREMENT PROCEDURES**

- .1 Preparation and implementation of an Environmental Protection Plan in accordance with this Section 01 35 43 – Environmental Procedures will not be measured separately for payment and will be considered incidental to the work.

### **1.5. SUBMITTALS**

- .1 The Contractor is required to prepare an Environmental Protection Plan in accordance with this Section 01 35 43 – Environmental Procedures.

### **1.6. NATIONAL PARK REGULATIONS**

- .1 The Contractor shall ensure that all work is performed in accordance with the ordinances, laws, rules and regulations set out in the Canada National Parks Act and Regulations.
- .2 The Contractor and any sub-Contractors shall obtain a business license from the Parks Canada Administration Office in Banff, prior to commencement of the contract.
- .3 All Contractors' vehicles are required to display a vehicle work pass from Parks Canada. These permits may be obtained free of charge from the Departmental Representative, PCA Environmental Officer or at the Park Gate.

### **1.7. CANADIAN ENVIRONMENTAL ASSESSMENT ACT (CEAA)**

- .1 Execution of the work is subject to the provisions within the Canadian Environmental Assessment Act (CEAA) Guidelines Order of 2003 and subsequent amendments, and Parks Canada's Interim Directive on Implementation of the Canadian Environmental Assessment Act 2012.
- .2 Failure to comply with or observe environmental protection measures as identified in these specifications may result in the work being suspended pending rectification of the problems.

### **1.8. MONITORING**

- .1 Parks Canada will have an ESO attending the site to monitor the construction activity for conformance with the EPP. The ESO or alternate designated Parks Canada staff member will present the "environmental briefing". The ESO's main duties are to monitor the progress of the construction on an on-going basis to ensure compliance with environmental protection measures, and to provide guidance through the Departmental Representative, in the event of unanticipated environmental problems. Although the ESO has authority to enforce National Parks Act violations, direction to the Contractor will be the duty of the Departmental Representative.

### **1.9. CONSTRUCTION SITE ACCESS AND PARKING**

- .1 The Contractor shall review both short and long term construction access requirements with the Departmental Representative, both at start-up and on an ongoing basis. In consultation with the Departmental Representative, the Contractor shall formulate an agreement for worker transportation to and from the work sites and where workers shall park their private vehicles. Generally, personal vehicles shall be parked at least 10 metres distance from any watercourse.
- .2 The Contractor shall ensure that the environment beyond the work limits is not negatively impacted or damaged by workers' vehicles or construction machinery and shall instruct workers so that the "footprint" of the project is kept within defined boundaries.

### **1.10. EROSION CONTROL**

- .1 Erosion control measures that prevent sediment from entering any waterway, water body or wetland in the vicinity of the construction site are a critical element of the project and shall be implemented by the Contractor.
- .2 If necessary, on-site sediment control measures shall be constructed and functional prior to initiating activities the hard surface paving. The Contractor shall prepare an Erosion Control Plan to the satisfaction of the Departmental Representative and the ESO.
- .3 The regular monitoring and maintenance of all erosion control measures shall be the responsibility of the Contractor. If the design of the control measures is not functioning effectively they are to be repaired. The Departmental Representative and ESO also will monitor erosion control performance.
- .4 The site will be secured against erosion during any periods of construction inactivity or shutdown.

### **1.11. POLLUTION CONTROL**

- .1 The Contractor shall prevent any deleterious and objectionable materials from entering streams, rivers, wetlands, water bodies or watercourses that would result in damage to aquatic and riparian habitat. Hazardous or toxic products shall be stored no closer than 30 meters from watercourses.
- .2 The containment, storage, security, handling, use, unique spill response requirements and disposal of empty containers, surplus product or waste generated in the use of any hazardous or toxic products shall be in accordance with all applicable federal and provincial legislation. Hazardous products shall be stored no closer than 30 metres from watercourses.
- .3 The Contractor shall prevent blowing dust and debris by covering and/or providing dust control for temporary roads and on-site work by methods that are approved by the Departmental Representative or ESO.
- .4 The Contractor shall provide spill kits at re-fuelling, lubrication, and repair locations that will be capable of dealing with 110% of the largest potential spill and shall be maintained in good working order on the construction site. The ESO and Departmental Representative prior to project start-up must approve these spill kits. The Contractor and site staff shall be informed of the location of the spill response kit(s) and be trained in its use.
- .5 Timely and effective action shall be taken to stop, contain and clean-up spills as long as the site is safe to enter. The Departmental Representative and ESO shall be notified immediately of any spill. If not available, Jasper Dispatch will be contacted at (780) 852-6155.
- .6 In the event of a major spill, all work shall be stopped and all personnel devoted to spill containment and clean-up.
- .7 The costs involved in a spill incident (the control, clean up, disposal of contaminants and site remediation to pre-spill conditions), shall be the responsibility of the Contractor. The site will be inspected to ensure completion to the expected standard and to the satisfaction of the

Departmental Representative and ESO. The costs involved in a spill incident (the control, clean up, disposal of contaminants and site remediation to pre-spill conditions), shall be the responsibility of the Contractor. The site will be inspected to ensure completion to the expected standard and to the satisfaction of the Departmental Representative and ESO.

#### **1.12. EQUIPMENT MAINTENANCE, FUELING AND OPERATION**

- .1 The Contractor shall ensure that all soil, seeds and any debris attached to construction equipment to be used on the project site shall be removed (e.g. power washing) outside the Jasper National Park before delivery to the work site.
- .2 Equipment fuelling sites will be identified by the Contractor and approved by the Departmental Representative and the ESO. Except for chain saws, any fuelling closer than 100 metres from any streams, wetlands, water bodies or waterways shall require the authorization and oversight of the Departmental Representative.
- .3 Mobile fuel containers (e.g. slip tanks, small fuel carboys) shall remain in the service vehicle at all times. Protection and containment of approved fuel storage sites is addressed in .4 of Pollution Control above.
- .4 Equipment used on the project shall be fuelled with E10, and low sulphur diesel fuels and shall conform to local emission requirements. The Contractor is to ensure that unnecessary idling of vehicles is avoided.
- .5 Oil changes, lubricant changes, greasing and machinery repairs shall be performed at locations approved by the ESO or the Departmental Representative. Waste lubrication products (e.g. oil filters, used containers, used oil, etc.) shall be secured in spill-proof containers and properly recycled or disposed of at an approved facility. No waste petroleum, lubricant products or related materials are to be discarded, buried or disposed of in borrow pits, turnouts, picnic areas, viewpoints, etc. anywhere within Jasper National Park.
- .6 The Contractor shall ensure that all equipment is inspected daily for fluid/fuel leaks and maintained in good working order.
- .7 Fuel containers and lubricant products shall be stored only in secure locations specified by the Departmental Representative. Fuel tanks or other potentially deleterious substance containers shall be secured to ensure they are tamperproof and cannot be drained by vandals when left overnight in Banff National Park. Alternatively, the Contractor may hire a security person employed to prevent vandalism.

#### **1.13. OPERATION OF EQUIPMENT**

- .1 Equipment movements shall be restricted to the 'footprint' of the construction area. The work limits shall be identified by stake and ribbon or other methods approved by the Departmental Representative. Unless authorized by the Departmental Representative, activities beyond the work limits are not permitted. No machinery will enter, work in or cross over streams, rivers, wetlands, water bodies or watercourses, nor damage aquatic and riparian habitat or trees and plant communities.

- .2 The Contractor shall instruct workers to prevent pushing, placement, raveling, storage or stockpiling of any materials (e.g. slash, rock, fill or topsoil) in the trees bordering the right-of-way or into watercourses or water bodies.
- .3 When, in the opinion of Parks Canada, negligence on the part of the Contractor results in damage or destruction of vegetation, or other environmental or aesthetic features beyond the designated work area, the Contractor shall be responsible, at his or her expense, for complete restoration including the replacement of trees, shrubs, topsoil, grass, etc. to the satisfaction of the Departmental Representative and ESO.
- .4 Restrict vehicle movements to work limits.

#### **1.14. FIRE PREVENTION AND CONTROL**

- .1 A fire extinguisher shall be carried and available for use on each machine and at locations within the Contact Work Area in the event of fire.
- .2 Construction equipment shall be operated in a manner and with all original manufacturer's safety devices to prevent ignition of flammable materials in the area.
- .3 Care shall be taken while smoking on the construction site to ensure that the accidental ignition of any flammable material is prevented. Fires or burning of slash and waste materials is not permitted.
- .4 In case of fire, the Contractor or worker shall take immediate action to extinguish the fire provided it is safe to do so. The ESO and the Departmental Representative shall be notified of any fire immediately. If not available, Jasper Dispatch shall be contacted at (780) 852-6155.
- .5 Fires or burning of waste materials is not permitted.

#### **1.15. WILDLIFE**

- .1 During the Environmental Briefing all personnel shall be instructed by the ESO on procedures to follow in the event of wildlife appearance near or within the work site and any other wildlife concerns.
- .2 Construction activities will take place during daylight hours and, if necessary, the construction activity may be scheduled around important wildlife windows.
- .3 All site workers will observe posted speed limits and avoid or terminate activities on site that attract or disturb wildlife and vacate the area and stay away from the immediate location if bears, cougars, wolves, elk or moose display aggressive behaviour or persistent intrusion. Extra care to control materials that might attract wildlife (e.g. lunches and food scraps) must be exercised at all times. The Contractor will ensure that the work site is properly secured during non-work hours with excavations fenced and covered as required to prevent injury to wildlife.
- .4 Notify the ESO and Departmental Representative immediately about dens, litters, nests, carcasses (road kills), bear activity or encounters on or around the site. Other wildlife-related

encounter are to be reported within 24 hours. If the ESO or Departmental Representative are not available, Jasper Dispatch will be contacted at (780) 852-6155.

#### **1.16. RELICS AND ANTIQUITIES**

- .1 Artifacts, relics, antiquities and items of historical interest such as cornerstones, commemorative plaques, inscribed tablets and similar objects found on the work site shall be reported to the ESO or the Departmental Representative immediately. The Contractor and workers shall wait for instruction before proceeding with their work.
- .2 All historical or archaeological objects found in Jasper National Park are protected under the National Parks Act and Regulations and are the property of Parks Canada. The Contractor and workers shall protect any articles found and request direction for the ESO or the Departmental Representative.

#### **1.17. WASTE MATERIALS STORAGE AND REMOVAL**

- .1 The Contractor and workers shall dispose of hazardous wastes in conformance with the Environmental Contaminants Act and applicable provincial regulations while observing the Code of Good Practice for Management of Hazardous and Toxic Wastes at Federal Establishments.
- .2 All wastes originating from construction, trade, hazardous and domestic sources, shall not be mixed, but will be kept separate.
- .3 Construction, trade, hazardous waste and domestic waste materials shall not be burned, buried or discarded at the construction site or elsewhere in Jasper National Park. These wastes shall be contained and removed in a timely and approved manner by the Contractor and workers, and disposed of at an appropriate waste landfill site located outside the park. Construction waste storage containers, provided by the Contractor, shall be emptied by the Contractor when 90% full. Waste containers will have lids, and waste loads shall be covered while being transported.
- .4 A concerted effort shall be made by the Contractor and workers to reduce, reuse and recycle materials.
- .5 All efforts to prevent wildlife from obtaining food, garbage or other domestic wastes shall be made by the Contractor and contract staff while undertaking their work in Jasper National Park. Such wildlife attractants shall not be stored at the work site overnight. Lunches, coolers and food products, including waste food products, shall be securely stored away from access by animals. Daily removal of food scraps, food wrappers, pop cans or other attractive products to bear proof containers, is mandatory.
- .6 The Contractor and workers shall immediately report any circumstances related to food/garbage (e.g. overflowing container or strong smell) and wildlife to the ESO or the Departmental Representative. If neither can be reached, the Contractor/worker shall immediately contact Jasper Dispatch at (780) 852-6155 and report the details.
- .7 Sanitary facilities, such as a portable container toilet, shall be provided by the Contractor and maintained in a clean condition.

### **1.18. MISCELLANEOUS SITE MANAGEMENT CONTINGENCIES**

- .1 If required, a material laydown, equipment parking and storage area will be permitted at the work site.
- .2 The National Park Act regulation prohibit anyone working within Jasper National Park from using public campground facilities.
- .3 The Contractor shall control blowing dust and debris generated from the construction site by means such as covering or wetting down dry materials and rubbish. Dust control measures for temporary access roads may also have to be initiated.
- .4 Security services at the construction site may be desirable or necessary during the contract, especially during quiet times. Fuel tanks or other potentially deleterious substance containers must be secured by the Contractor to ensure they are tamperproof and cannot be drained by vandals.
- .5 Pets shall not be brought to or maintained at the construction site.
- .6 Should the Contractor require/request a water source, the Departmental Representative, in consultation with the ESO may give direction as to an alternative location to be used. Specific intake measures are required when water is approved to be withdrawn from open watercourses.

### **Part 2. Products**

#### **2.1. NOT USED.**

### **Part 3. Execution**

#### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Measurement procedures
- .2 Testing by the Contractor.
- .3 Contractor' Quality Control Program.
- .4 Inspection
- .5 Independent Inspection Agencies
- .6 Access to Work
- .7 Reports
- .8 Tests and mix designs
- .9 Mill tests

### **1.2. PRECEDENCE**

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

### **1.3. RELATED SECTIONS**

- .1 All Division 01, 02 and 03 Sections

### **1.4. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment.

### **1.5. REFERENCES**

- .1 Canadian Standards Association (CSA)
- .2 CAN/CSA-A23.2-04, Methods of Test and Standard Practices for Concrete

### **1.6. TESTING BY THE CONTRACTOR**

- .1 Testing required providing quality control to assure that the Work strictly complies with the Contract requirements shall include, but not be limited to:
  - .1 Testing all structural concrete, grout, reinforcing steel, asphalt concrete pavement, backfill under paved areas, asphalt concrete pavement and all source acceptance testing ; and
  - .2 All testing specified in the Contract Documents; and
  - .3 Any other testing required as a condition for deviation from the specified Contract procedures.

- .2 Testing proposed shall be based on testing requirements in the August 2007 Alberta Transportation Standard Specifications for Highway Construction Manual and subsequent updates.
- .3 The Contractor shall be fully responsible and bear all costs for all quality control testing and shall conduct such testing in the following manner:
  - .1 Provide testing facilities and personnel for the tests and inform the Departmental Representative in advance to enable the Departmental Representative to witness the tests if it so desired;
  - .2 Notify the Departmental Representative when sampling will be conducted;
  - .3 Within one Day after completion of testing, submit test results to the Departmental Representative; and
  - .4 Identify test reports with the name and address of the organization performing all tests, and the date of the tests.
- .4 Approval of tested samples will be for characteristics or use named in such approval and shall not change or modify any Contract requirements.
- .5 Testing agencies, their inspectors, and their representatives are not authorized to revoke, alter, relax, enlarge or release any requirement of the Contract Documents, nor to approve or accept any part of the Work

#### **1.7. CONTRACTOR'S QUALITY CONTROL PROGRAM**

- .1 The Contractor shall prepare a Quality Control Program. The purpose of the program shall be to ensure the performance of the Work in accordance with Contract requirements.
- .2 The Quality Control Program shall be described in a Quality Control Manual. The Contractor shall submit the Manual to the Departmental Representative for review in accordance with Section 01 33 00, Submittal Procedures. The Manual shall develop a logical system for tracking and documenting the Quality Control of the Work. A systematic format and a set of procedures patterned on a recognized Quality Control Standard will be acceptable, subject to review by the Departmental Representative.
- .3 The Quality Control Manual shall include the following information:
  - .1 Distribution list, providing a list of names to whom the Manual shall be distributed;
  - .2 Title page, identifying the Contract, Contractor and copy number;
  - .3 Revision page, identifying the revision number and date of the Manual;
  - .4 Table of contents;
  - .5 Revision control, tabulating the revision number, date of revision, description of revisions and authorized signature;
  - .6 Details of measuring and testing equipment including methods and frequency of calibration;
  - .7 Purchasing details of all materials and equipment including procurement documents and vendor's Quality Control Program standards;
  - .8 Procedures for inspection of incoming items, in-process inspection and final inspection and tagging of all supply items;
  - .9 Details of special processes as identified by the Departmental Representative, including qualifications of personnel and certification;

- .10 Procedures for shipping, packaging and storage of materials;
  - .11 Procedures for maintaining quality records and Statements of Compliance, including filing and storage of documents for a period of one year after Completion of the Works;
  - .12 Details of any non-conformance, including identification and recording of deficiencies, tagging procedures for "HOLD" or "REJECT" items, and final disposition of non-conformance forms by the Quality Control Manager;
  - .13 Inspection and test checklists, including tabulated checklists describing all manufacturing and delivery activities such as Inspection or Test, frequency of tests, description of tests, acceptance criteria of tests, such as verification, witnessing or holding tests and sign-off by the Quality Control Manager and the Departmental Representative, if the Departmental Representative witnesses the tests; and
  - .14 Forms used to ensure the application of the inspection and test checklist requirements. These forms shall be identified in the checklists and describe all testing requirements for Specification compliance.
- .4 The Contractor shall appoint a Quality Control Manager who shall report regularly to the Contractor's management at a level which shall ensure that Quality Control requirements are not subordinated to manufacturing, construction or delivery. The Quality Control Manager shall be empowered by the Contractor to resolve quality matters.
- .5 The Quality Control Manual shall include samples of all forms to be filled in by the Quality Control Inspectors. All forms shall be signed by the Quality Control Manager and submitted promptly to the Departmental Representative who will add its review signature.
- .6 An independent check of all Work shall be performed by the Contractor. The Contractor shall appoint Quality Control Inspectors to ensure compliance of products and workmanship with Contract requirements. The same personnel may not be used to perform a given task and to check the quality and accuracy of the task.
- .7 At completion of the Work a bound and itemized copy of all Quality Control documents and reports shall be prepared by the Contractor's Quality Manager and submitted to the Departmental Representative.

## **1.8. INSPECTION**

- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction.

### **1.9. INDEPENDENT INSPECTION AGENCIES**

- .1 Independent Inspection/Testing Agencies will be engaged by the Departmental Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Departmental Representative.
- .2 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .3 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by the Departmental Representative at no cost to the Departmental Representative.

### **1.10. ACCESS TO WORK**

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co operate to provide reasonable facilities for such access.

### **1.11. PROCEDURES**

- .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Provide labour and facilities to obtain and handle samples and materials on site.

### **1.12. REJECTED WORK**

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in opinion of Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which shall be determined by Departmental Representative.

### **1.13. REPORTS**

- .1 Submit 4 copies of inspection and test reports to Departmental Representative.

### **1.14. TESTS AND MIX DESIGNS**

- .1 Furnish test results and designs as may be requested

**1.15. MILL TESTS**

- .1 Submit mill test certificates as required of specification sections

**Part 2. Products**

- 2.1. NOT USED.**

**Part 3. Execution**

- 3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. INSTALLATION AND REMOVAL**

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.

### **1.2. SITE STORAGE/LOADING**

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.

### **1.3. CONSTRUCTION PARKING**

- .1 Provide and maintain adequate access and parking at the project site in areas approved by the Departmental Representative.
- .2 Build and maintain temporary roads and provide snow removal during period of Work.
- .3 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads.

### **1.4. SECURITY**

- .1 If required by the Contractor, provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays. For extended shut-downs, the Contractor shall provide the level of security as required to protect the Work. The Contractor is advised that some random acts of vandalism to equipment have occurred within the Park.

### **1.5. OFFICES**

- .1 Provide office of sufficient size to accommodate site meetings and furnished with drawing laydown table.
- .2 Provide a clearly marked and fully stocked first aid case in a readily available location.

### **1.6. EQUIPMENT, TOOL AND MATERIALS STORAGE**

- .1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.

### **1.7. SANITARY FACILITIES**

- .1 Provide sanitary facilities for work force in accordance with governing regulations, ordinances and the EPP.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.

### **1.8. CONSTRUCTION SIGNAGE**

- .3 No other signs or advertisements, other than warning signs, are permitted on site.
- .4 Signs and notices for safety and instruction shall be in both official languages Graphic symbols shall conform to CAN3 Z321.
- .5 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Departmental Representative.

### **1.9. 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 areas of the Park, 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.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Installation and removal
- .2 Guardrails and barricades
- .3 Access to site.
- .4 Public traffic flow.
- .5 Protection for off-site and public property

### **1.2. PRECEDENCE**

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

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. RELATED SECTIONS**

- .1 Section 01 52 00 Construction Facilities.

### **1.5. INSTALLATION AND REMOVAL**

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

### **1.6. HOARDING**

- .1 Provide barriers around trees and plants designated to remain. Protect from damage by equipment and construction procedures.

### **1.7. GUARD RAILS AND BARRICADES**

- .1 Provide secure, rigid guard rails and barricades around deep excavations.

### **1.8. ACCESS TO SITE**

- .1 Provide and maintain access roads, as may be required for access to Work.

### **1.9. PUBLIC TRAFFIC FLOW**

- .1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect the public.

**1.10. PROTECTION FOR OFF SITE AND PUBLIC PROPERTY**

- .1 Protect surrounding public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

**Part 2. Products**

**2.1. NOT USED.**

**Part 3. Execution**

**3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Quality.
- .2 Availability.
- .3 Storage, handling and protection.
- .4 Transportation.
- .5 Manufacturer's instructions.
- .6 Quality of work.
- .7 Coordination.
- .8 Concealment.
- .9 Remedial work.
- .10 Fastenings.
- .11 Protection of work in progress.

### **1.2. RELATED SECTIONS**

- .1 Section 01 45 00 - Quality Control.

### **1.3. REFERENCE STANDARDS**

- .1 Within text of each specifications section, reference may be made to reference standards.
- .2 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .3 If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .4 Cost for such testing will be borne by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .5 Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.

### **1.4. QUALITY**

- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible

- with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
  - .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
  - .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

### **1.5. AVAILABILITY**

- .1 Immediately after signing contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work
- .2 In the event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

### **1.6. STORAGE, HANDLING AND PROTECTION**

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber and misc metals on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.

- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

#### **1.7. TRANSPORTATION**

- .1 Pay costs of transportation of products required in performance of Work.

#### **1.8. MANUFACTURER'S INSTRUCTIONS**

- .2 Unless otherwise indicated in specifications install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .3 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative may establish course of action.
- .4 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

#### **1.9. QUALITY OF WORK**

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative whose decision is final.

#### **1.10. CO-ORDINATION**

- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

#### **1.11. CONCEALMENT**

- .1 The Departmental Representative will inspect all work prior to any concrete pours. The Contractor shall notify the Departmental Representative 24 hours before any pour for inspection.

#### **1.12. REMEDIAL WORK**

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.

- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

### **1.13. FASTENINGS**

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Qualifications of Surveyor
- .2 Survey reference points
- .3 Survey requirements
- .4 Survey accuracy
- .5 Notification
- .6 Records Submittals

### **1.2. PRECEDENCE**

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

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. RELATED SECTIONS**

- .1 Section 01 32 18 Construction Progress Schedules - Bar (GANTT) Chart.

### **1.5. REFERENCES**

- .1 Owner's identification of existing survey control points and property limits.

### **1.6. QUALIFICATIONS OF SURVEYOR**

- .1 Qualified registered land surveyor, licensed to practise in Place of Work, acceptable to Departmental Representative.

### **1.7. SURVEY REFERENCE POINTS**

- .1 Existing base horizontal and vertical control points are shown on Drawings.
- .2 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .3 Make no changes or relocations without prior written notice to Departmental Representative.
- .4 Report to Departmental Representative when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.

- .5 Require surveyor to replace control points in accordance with original survey control.

#### **1.8. SURVEY REQUIREMENTS**

- .1 Contractor will be responsible for all staking and layout including but not limited to:
- .2 Establish lines and levels, locate and lay out, by instrumentation.
- .3 Stake for grading, cut and fill.
- .4 Stake slopes and top of embankment as required during construction
- .5 Establish pipe invert elevations and locations.
- .6 Departmental Representative will complete all measurement surveys.

#### **.7 RECORDS**

- .8 Maintain a complete, accurate log of control and survey work as it progresses.
- .9 Record locations of maintained, re routed and abandoned service lines.

#### **1.9. SUBMITTALS**

- .1 Submit name and address of Surveyor to Departmental Representative.
- .2 On request of Departmental Representative, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying those elevations and locations of completed Work that conform with Contract Documents.

### **Part 2. Products**

#### **2.1. NOT USED.**

### **Part 3. Execution**

#### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Progressive cleaning.
- .2 Final cleaning.

### **1.2. PRECEDENCE**

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

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. RELATED SECTION**

- .1 Section 01 35 43 - Environmental Procedures.
- .2 Section 01 77 00 Closeout Procedures.

### **1.5. PROJECT CLEANLINESS**

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Owner or other Contractors.
- .2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .3 Clear snow and ice from access to work areas during active construction periods and when access to environmental protection facilities required outside active construction times.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on site bear proof containers for collection of waste materials and debris.
- .6 Remove waste material and debris from site at end of each working day.
- .7 Dispose of waste materials and debris off site.
- .8 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .9 Provide adequate ventilation during use of volatile or noxious substances.
- .10 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

## **1.6. FINAL CLEANING**

- .1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .3 Remove waste products and debris including that caused by Owner or other Contractors.
- .4 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .6 Inspect finishes, and ensure specified workmanship and operation.
- .7 Remove dirt and other disfiguration from exterior surfaces.
- .8 Sweep and wash clean paved areas.
- .9 Clean drainage systems.

## **Part 2. Products**

### **2.1. NOT USED.**

## **Part 3. Execution**

### **3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 Inspection and declaration

### **1.2. PRECEDENCE**

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

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. RELATED SECTIONS**

- .1 Section 01 74 11 - Cleaning.
- .2 Section 01 78 00 - Closeout Submittals.

### **1.5. INSPECTION AND DECLARATION**

- .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
- .2 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
- .3 Request Departmental Representative's Inspection.
- .4 Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- .5 Completion: submit written certificate that following have been performed:
- .6 Work has been completed and inspected for compliance with Contract Documents.
- .7 Defects have been corrected and deficiencies have been completed.
- .8 Work is complete and ready for Final Inspection.
- .9 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative, and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

**Part 2. Products**

**2.1. NOT USED.**

**Part 3. Execution**

**3.1. NOT USED.**

END OF SECTION

## **Part 1. General**

### **1.1. SECTION INCLUDES**

- .1 As built, samples, and specifications.
- .2 Warranties and bonds.
- .3 Final site survey.

### **1.2. PRECEDENCE**

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

### **1.3. MEASUREMENT PROCEDURES**

- .1 This work shall be incidental to contract and will not be measured for payment

### **1.4. RELATED SECTIONS**

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 45 00 Quality Control.
- .3 Section 01 71 00 Examination and Preparation.
- .4 Section 01 77 00 Closeout Procedures.

### **1.5. AS BUILTS AND SAMPLES**

- .1 In addition to requirements in General Conditions, maintain at the site for Departmental Representative one record copy of:
  - .2 Contract Drawings.
  - .3 Specifications.
  - .4 Addenda.
  - .5 Change Orders and other modifications to the Contract.
  - .6 Reviewed shop drawings, product data, and samples.
  - .7 Field test records.
  - .8 Inspection certificates.
  - .9 Manufacturer's certificates.

- .10 Store record documents and samples in field office apart from documents used for construction.
- .11 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .12 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .13 Keep record documents and samples available for inspection by Departmental Representative.

#### **1.6. RECORDING ACTUAL SITE CONDITIONS**

- .1 Record information on set of black line opaque Drawings and in copy of the Project Manual.
- .2 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .3 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
  - .3 Field changes of dimension and detail.
  - .4 Changes made by change orders.
  - .5 Details not on original Contract Drawings.
  - .6 References to related shop drawings and modifications.
  - .7 Specifications: legibly mark each item to record actual construction, including:
  - .8 Changes made by Addenda and change orders.

#### **1.7. FINAL SURVEY**

- .1 Departmental Representative may request the Contractor to submit a final site survey certificate in accordance with Section 01 71 00 Examination and Preparation, certifying that elevations and locations of completed Work are in conformance, or non conformance with Contract Documents.

#### **1.8. WARRANTIES AND BONDS**

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- .4 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
- .5 Verify that documents are in proper form, contain full information, and are notarized.

- .6 Co execute submittals when required.
- .7 Retain warranties and bonds until time specified for submittal.

**Part 2. Products**

**2.1. NOT USED.**

**Part 3. Execution**

**3.1. NOT USED.**

END OF SECTION