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**Part 1            General**

**1.1                WORK COVERED BY CONTRACT DOCUMENTS**

- .1        The Work in this Contract comprises rehabilitation of 23.7km of pavement and associated activities on Route 117 in the Kouchibouguac National Park, New Brunswick.

**1.2                CONTRACT METHOD**

- .1        Construct Work under unit price contract.

**1.3                WORK BY OTHERS**

- .1        Co-ordinate work with that of other Contractors. Several bridges on Route 117 within the Kouchibouguac National Park will be rehabilitated by other contractors in 2015 and may present traffic disruptions to the pavement rehabilitation project.
- .2        Additional payments or schedule extensions due to work or scheduling conflicts with other Contractors will not be considered.
- .3        Prior to construction, beaver dams and ponds shall be removed by others.

**1.4                WORK SEQUENCE**

- .1        Construct Work in stages to accommodate continuous public access to the Kouchibouguac National Park including all park facilities.
- .2        Work locations and traffic management to be in accordance with the latest edition of the New Brunswick Work area Traffic Control Manual (WATCM).

**1.5                CONTRACTOR USE OF PREMISES**

- .1        Limit use of premises for Work, to allow:
  - .1        Work by other contractors.
  - .2        Public usage.
  - .3        Parks Canada will not accommodate the Contractor with a location for their construction trailer.
- .2        Storage areas for Contractor's equipment and materials shall be located outside the Park boundaries. Locations for equipment and materials storage areas shall be the responsibility of the Contractor.
- .3        Disposal of waste materials shall outside the Park Boundaries except as directed in these specifications. Locations and costs associated with waste disposal shall be the responsibility of the Contractor.
- .4        Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Owners Representative.

## **1.6 SUMMARY OF WORK**

- .1 The tasks associated with the pavement rehabilitation of Route 117 in the Kouchibouguac National Park are summarized as follows. Details of the requirements are provided in the project technical specifications.
  - .1 Provide and implement designated controls for traffic and environmental aspects of the work.
  - .2 Clearing, grubbing, ditching and subgrade widening as required.
  - .3 Replacement of existing varying sized culverts including rip rap and end treatments where required.
  - .4 Removal of existing asphalt concrete and reuse/disposal as required.
  - .5 Removal and reuse/disposal of existing granular base, subbase and subgrade materials to the required elevation.
  - .6 Compact and proof roll new subgrade surface.
  - .7 Remove existing guide rail posts and install new in designated locations.
  - .8 Supply and place granular base and subbase materials.
  - .9 Supply and place base course asphalt concrete and temporary markings.
  - .10 Remove signs and sign posts and replace sign posts and reinstate signs.
  - .11 Supply and place topsoil and hydroseeding on designated slopes.
  - .12 Supply and place of surface course asphalt concrete and final pavement markings (2016).

## **1.7 EXISTING SERVICES**

- .1 Establish location and extent of service lines in area of work before starting Work. Notify Owners Representative of findings.
- .2 Protect, relocate or maintain existing active services.

## **1.8 DOCUMENTS REQUIRED**

- .1 Maintain at job site, one copy each document as follows:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Reviewed Shop Drawings.
  - .5 List of Outstanding Shop Drawings.
  - .6 Change Orders.
  - .7 Other Modifications to the Contract.
  - .8 Field Test Reports.
  - .9 Copy of Approved Work Schedule.
  - .10 Health and Safety Plan and Other Safety Related Documents.
  - .11 Other documents as specified.
  - .12 Construction Schedule

.13      Environmental Control Plan (ECP)

**END OF SECTION**

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**Part 1            General**

**1.1            ACCESS AND EGRESS**

- .1      Design, construct and maintain temporary "access to" and "egress from" work areas, in accordance with relevant municipal, provincial and other regulations.

**1.2            USE OF SITE AND FACILITIES**

- .1      Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated.
- .2      Provide for personnel and vehicle access.
- .3      Where security is reduced by work provide temporary means to maintain security.

**1.3            ALTERATIONS, ADDITIONS OR REPAIRS**

- .1      Execute work with least possible interference or disturbance to public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.
- .2      Any pavement removed in 2015 shall be replaced in 2015, otherwise the Contractor will bear the cost to maintain these areas outside of paving cut-off dates until paving can resume in 2016.

**1.4            EXISTING SERVICES**

- .1      Notify Departmental Representative and utility companies of intended interruption of services and obtain required permission.
- .2      Provide for personnel, pedestrian and vehicular traffic. Provide for one lane traffic during working hours and provide two lane traffic at the end of each working day.
- .3      Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

**1.5            SPECIAL REQUIREMENTS**

- .1      Work outside of normal working hours will require 48 hours written notice to the Departmental Representative. There are no restrictions on working on nights, weekends or statutory holidays.
- .2      Submit schedule in accordance with Section 01 32 16.07 - Construction Progress Schedule - Bar (GANTT) Chart.
- .3      Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.
- .4      Keep within limits of work and avenues of ingress and egress.

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**Part 2            Products**

**2.1                NOT USED**

.1            Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 MEASUREMENT**

- .1 All measurement shall be along a horizontal plane unless otherwise indicated.

**1.2 PAY ITEMS**

- .1 All items in this contract will be paid for by cost included in the unit prices and one Lump Sum Payment for costs not include in these items.
- .2 Bid Item 1 – Section 01 35 00.06 – Special Procedures for Traffic Control
  - .1 Terms of Payment: Lump Sum
  - .2 This Item includes:
    - .1 Flagpersons and traffic accommodation person(s)
    - .2 Provision, installation and maintenance of temporary traffic control devices, including detour signs, construction signage and electronic message boards.
    - .3 Provision and maintenance of detours.
    - .4 Vehicles, equipment, supplies, and additional manpower required by traffic accommodations persons.
- .3 Bid Item 2 – Section 01 35 43 – Environmental Procedures
  - .1 Terms of Payment: Lump Sum
  - .2 This item includes:
    - .1 Periodic and general maintenance of all erosion control measures or as directed by Departmental Representative.
- .4 Bid Item 3 – Section 01 52 00 – Construction Facilities
  - .1 Terms of Payment: Lump Sum
  - .2 This item includes:
    - .1 Construction Site Trailer
    - .2 Asphalt Lab
- .5 Bid Item 4 - Section 02 41 13 - Selective Site Demolition - Removal of guide rail and posts.
  - .1 Unit of Measurement: Lineal metre.
  - .2 Method of Measurement: End points of measurements will be at centreline of the guide rail and at the ends of each section of guide rail.
  - .3 This item includes: dismantling, salvage, stockpiling, and disposal of guide rail, hardware, wooden guide posts and offset blocks as indicated in the Contract Documents.
  - .4 There shall be no payment for transporting and stockpiling salvaged materials.

- .6 Bid Item 5 - Section 02 41 13 - Selective Site Demolition - Removal of signs and sign posts.
  - .1 Unit of Measurement: Each
  - .2 Method of Measurement: Number of posts removed.
  - .3 This item includes: dismantling, salvaging and transporting of signs and hardware to a location within Kouchibouguac National Park, and disposal of posts. There shall be no payment for transporting and stockpiling salvaged materials.
- .7 Bid Item 6 - Section 02 41 13.14 - Asphalt Paving Removal (Cold Milling)
  - .1 Removal of existing asphalt pavement will be measured in square metres of surface actually removed regardless of depth removed. Payment at the contract unit price shall be compensation in full for all labour, materials and use of equipment to; carry out the cold milling to full depth, sweep the milled surface and load and haul milled material to stockpile locations outside the Park boundaries for future use as shoulder material, on other roads, base asphalt mix and stockpiled for future park use under this contract as indicated by the Departmental Representative with the remainder becoming the property of the Contractor.
- .8 Bid Item 7 – Section 10 14 53 – Traffic Signage
  - .1 Terms of Payment: Lump Sum
  - .2 This item includes:
    - .1 Installation of new sign posts as indicated on the Plans.
    - .2 Installation of signs as supplied by the Departmental Representative.
- .9 Bid Items 8 and 9 - Section 31 11 00 – Clearing and Grubbing
  - .1 Clearing will be measured in hectares by plan area within limits indicated or as directed by the Departmental Representative.
  - .2 Grubbing will be measured in hectares by plan area within the limits indicated or as directed by the Departmental Representative.
  - .3 This Section includes: mobilization and demobilization for the project.
- .10 Bid Item 10 - Section 31 14 13 - Soil Stripping and Stockpiling:
  - .1 Unit of Measurement: Square metres of surface area (slope measurement).
  - .2 Method of Measurement: The surface area shall be measured jointly with the Departmental Representative using a measuring wheel or approved alternative method.
  - .3 This item includes: removal and stockpiling of topsoil along the backslope and or toe of slope.
  - .4 There shall be no payment for areas stripped outside the construction limits unless approved by the Departmental Representative.
- .11 Bid Item 11 - Section 31 23 33.01 - Excavating, Trenching and Backfilling:
  - .1 Unit of Measurement: cubic metres.

- .2 Method of Measurement: calculated from cross sections taken by the Departmental Representative in areas of excavation. Departmental Representative will take initial cross sections after clearing, grubbing, stripping and removal of asphalt are completed and immediately prior to excavation of material to be incorporated into work. Final cross sections will be taken when material is excavated to the final lines and grades.
  - .3 This item includes: excavation, loading, hauling, placement and compaction of excavated material as indicated on the drawings, including areas where culverts are being removed and not replaced. This item also includes roadway dust control. Surplus material not incorporated into the roadway cross section shall become the property of the Contractor and disposed of outside the parkway.
  - .4 There shall be no payment for excavation beyond the limits indicated on the drawings.
- .12 Bid Items 12 and 13 - Section 32 11 23 - Shoulder Material - Reclaimed Asphalt Product (RAP):
- .1 Shoulder Material – Route 117
    - .1 Unit of Measurement: Metric Tonne (1000 kg).
    - .2 Method of Measurement: to the theoretical lines and grades as indicated on the drawings.
    - .3 This item includes: supply, haulage, processing, placement and compaction of shoulder material (RAP) to the limits and at the locations indicated on the drawings.
    - .4 There shall be no payment for extra thickness or width of shoulder material placed outside of limits unless approved or directed by the Departmental Representative.
  - .2 Other Locations – Reclaimed Asphalt Product (RAP)
    - .1 Unit of Measurement: Cubic Metres.
    - .2 Method of Measurement: from truck volumes.
    - .3 This item includes: supply, haulage, processing, placement and compaction of RAP to be placed at the following locations:
      - .1 Callanders Road, approximately 9 km from Route 117 (on the parkway). The estimated volume is 1400 cubic metres.
      - .2 Côte à Fabien Road, approximately 4 km from Route 117 (on the Loggiecroft Road). The estimated volume is 900 cubic metres.
    - .3 There shall be no payment for RAP incorporated into the asphalt base coarse mix and for approximately 1000 cubic metres to be stockpiled within the parkway at a location specified by the Departmental Representative.
- .13 Bid Item 14 - Section 32 11 16.01 – Granular Sub-base:
- .1 Unit of Measurement: Metric Tonne (1000 kg).
  - .2 Method of Measurement: from accepted truck slips.
  - .3 This item includes: supply, haulage, placement and compaction of granular materials to the limits and at the locations indicated on the drawings.



- .4 There shall be no payment for extra thickness of sub-base materials placed outside of limits. Whenever in the opinion of the Departmental Representative there is extra thickness, the appropriate weight will be deducted.
- .14 Bid Item 15 - Section 32 11 23 – Aggregate Base Courses:
  - .1 Unit of Measurement: Metric Tonne (1000 kg).
  - .2 Method of Measurement: from accepted truck slips.
  - .3 This item includes: supply, haulage, placement and compaction of granular materials to the limits and at the locations indicated on the drawings.
  - .4 There shall be no payment for extra thickness of base materials placed outside of limits. Whenever in the opinion of the Departmental Representative there is extra thickness, the appropriate weight will be deducted.
- .15 Bid Item 16 - Section 32 12 13.16 - Asphalt Tack Coat:
  - .1 Measurement for payment shall be the horizontal area actually treated with tack coat lying within the area designated by the Departmental Representative. The area shall be computed in square metres, rounded to one decimal point.
  - .2 Payment at the contract price for Tack Coat shall be compensation in full for all labour, materials and equipment used to: clean the existing surface, supply and apply the tack coat, together with the provision of portable traffic lights, if required.
- .16 Bid Items 17 and 18 - Section 32 12 16 – Asphalt Paving (Type B and Type D):
  - .1 Unit of Measurement: Type B - Metric Tonne (1000 kg), Type D – Metric Tonne (1000 kg)
  - .2 Method of Measurement: from accepted truck slips, except as provided below.
  - .3 Payment adjustment will be made for escalation in the price of liquid asphalt in accordance with NBDTI Standard Specification Item 821 - Adjustment for Asphalt Binder Price.
  - .4 There shall be no payment for extra thickness or extra width of asphalt placed. Wherever in the opinion of the Departmental Representative there is extra thickness, the appropriate weight will be deducted.
- .17 Bid Item 19 - Section 32 17 23 - Pavement Markings:
  - .1 Measurement for payment for pavement markings, including reflective glass beads, shall be in kilometres (km), or parts thereof rounded to two decimal places, measured along the centreline of the roadway, and will include centrelines to match existing layout (double solid, solid/dash or single dash lines), two shoulder lines, as well as all intersections, arrows, delineation, special markings and temporary markings, etc.
  - .2 No additional payment for traffic control associated with the application of pavement markings shall be made.
  - .3 All pavement markings to be in accordance with the Manual of Uniform Traffic Devices for Canada, latest edition. Pre-marking by NBDTI will be coordinated

by the Departmental Representative. Temporary pavement markings shall be incidental to the Work.

- .18 Bid Item 20 - Section 32 91 19.13 - Topsoil Placement and Grading:
- .1 Unit of Measurement: Square metres of surface area (slope measurement).
  - .2 Method of Measurement: The surface area shall be measured jointly with the Departmental Representative using a measuring wheel or approved alternative method.
  - .3 This item includes: Placement and grading of topsoil stockpiled along the backslope and or toe of slope on finished slopes to a thickness of 100 mm. This item also includes the application of hydraulic seeding and mulching.
  - .4 There shall be no payment for areas topsoiled and/or hydroseeded and mulched outside the construction limits unless approved by the Departmental Representative.
- .19 Bid Items 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 and 31 - Section 33 42 13.14 – Pipe Culverts (Various Sizes and Types, including Fish Rescue and Temporary Water Control Works):
- .1 Unit of Measurement: metre (m) for each size and type of culvert.
  - .2 Method of Measurement: along centreline of new culvert pipe, from end to end of culvert, as laid and as accepted by the Departmental Representative.
  - .3 Payment for this item includes:
    - .1 Dewatering of site.
    - .2 Excavation, removal and disposal of existing asphalt concrete at culvert replacement locations if prior to cold milling operations.
    - .3 Excavation of trench, supply and placement of bedding and backfill material, and disposal of all old fill and culvert material, as well as any extra excavated material required to install new culvert.
    - .4 Supply and placement of new culvert.
    - .5 Fish baffles
    - .6 Rip rap and individual rock placement.
    - .7 Sediment Control Fence
    - .8 Strawbale Flow Checks
    - .9 All other cost not included with other units in this contract.
  - .4 This item also includes the following Lump Sum Payment Items:
    - .1 Fish Rescue, in accordance with the NBDTI Standard Specification Item 622 – Fish Rescue.
    - .2 Temporary Water Control Works, in accordance with the NBDTI Standard Specification Item 621 – Temporary Water Control Works.
      - .1 This Item includes:
        - .1 Temporary culverts
        - .2 Pumps
        - .3 Sand bags

- .4 Dewatering
- .5 Materials and labour required to control the water.
- .20 Bid Item 32 - Section 34 71 13.21 - Vehicle Guide Posts:
  - .1 Unit of Measurement: Each.
  - .2 Method of Measurement: number and size of guide posts installed as indicated on the drawings.
  - .3 This item includes: Supply and installation of new guide posts.
  - .4 There shall be no payment for offset blocks supplied from salvaged guide posts under Section 02 41 13 – Selective Site Demolition.
- .21 Bid Item 33 - Section 34 71 13.25 - Vehicle W-Beam Guide Rail:
  - .1 Unit of Measurement: Metre.
  - .2 Method of Measurement: lineal metres of guide rail installed as indicated on the drawings. The measurement shall be taken along the centre of the guide rail from end to end of each section of guide rail including buried ends, not including overlaps.
  - .3 This item includes: Supply and installation of new guide rail, hardware, delineators and plow markers. This item also includes the placement of salvaged guide rail and hardware at the four bridge locations identified in Section 34 71 13.25 – Vehicle W-Beam Guide Rail.
  - .4 There shall be no payment for guide rail overlaps.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

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**Part 1            General**

**1.1                REFERENCES**

- .1        New Brunswick Department of Transportation and Infrastructure Standard Specifications (most recent version):
  - .1            NBDTI Standard Specification Item 906 – Work Schedule.

**1.2                ADMINISTRATIVE**

- .1        Schedule and administer project meetings throughout the progress of the work at the call of Departmental Representative.
- .2        Prepare agenda for meetings.
- .3        Distribute written notice of each meeting four days in advance of meeting date to Departmental Representative.
- .4        Provide physical space and make arrangements for meetings.
- .5        Preside at meetings.
- .6        Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .7        Reproduce and distribute copies of minutes within three days after meetings and transmit to meeting participants, affected parties not in attendance and the Departmental Representative.
- .8        Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

**1.3                PRECONSTRUCTION MEETING**

- .1        Within 15 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2        Senior representatives of Departmental Representative, Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3        Establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
- .4        Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .5        Agenda to include:
  - .1            Appointment of official representative of participants in the Work.
  - .2            Schedule of Work: in accordance with NBDTI Standard Specification Item 906 – Work Schedule
  - .3            Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.

- .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 52 00 - Construction Facilities.
- .5 Site security in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- .6 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
- .7 Owner provided products.
- .8 Record drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .9 Maintenance manuals in accordance with Section 01 78 00 - Closeout Submittals.
- .10 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.
- .11 Monthly progress claims, administrative procedures, photographs, hold backs.
- .12 Appointment of inspection and testing agencies or firms.
- .13 Insurances, transcript of policies.

#### **1.4 PROGRESS MEETINGS**

- .1 During course of Work and two weeks prior to project completion, schedule progress meetings bi-weekly.
- .2 Contractor, major Subcontractors involved in Work and Departmental Representative are to be in attendance.
- .3 Notify parties minimum 7 days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within 4 days after meeting.
- .5 Agenda to include the following:
  - .1 Review, approval of minutes of previous meeting.
  - .2 Review of Work progress since previous meeting.
  - .3 Field observations, problems, conflicts.
  - .4 Problems which impede construction schedule.
  - .5 Review of off-site fabrication delivery schedules.
  - .6 Corrective measures and procedures to regain projected schedule.
  - .7 Revision to construction schedule.
  - .8 Progress schedule, during succeeding work period.
  - .9 Review submittal schedules: expedite as required.
  - .10 Maintenance of quality standards.
  - .11 Review proposed changes for effect on construction schedule and on completion date.
  - .12 Other business.

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**Part 2            Products**

**2.1                NOT USED**

.1            Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**

## **Part 1 General**

### **1.1 DEFINITIONS**

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): 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.
- .3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. 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.
- .9 Project Planning, Monitoring and Control System: overall system operated by Departmental Representative to enable monitoring of project work in relation to established milestones.

### **1.2 REQUIREMENTS**

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- .4 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.

### **1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to Departmental Representative within working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to Departmental Representative within 5 working days of receipt of acceptance of Master Plan.

### **1.4 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.

### **1.5 PROJECT SCHEDULE**

- .1 Develop detailed Project Schedule derived from Master Plan.

### **1.6 PROJECT SCHEDULE REPORTING**

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .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.

### **1.7 PROJECT MEETINGS**

- .1 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.
- .2 Weather related delays with their remedial measures will be discussed and negotiated.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not used.



**Part 3            Execution**

**3.1                NOT USED**

.1            Not used.

**END OF SECTION**

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**Part 1            General**

**1.1                ADMINISTRATIVE**

- .1      Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2      This section specifies general requirements and procedures for Contractor's submissions of shop drawings, product data, samples and mock-ups to the Departmental Representative for review. Additional specific requirements for submissions are specified in individual sections.
- .3      Do not proceed with Work until relevant submissions are reviewed by the Departmental Representative.
- .4      Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .5      Where items or information is not produced in SI Metric units converted values are acceptable.
- .6      Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .7      Notify the Departmental Representative, in writing, at the time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .8      Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review of submission.
- .9      Make any changes which Departmental Representative may require consistent with Contract Documents and resubmit as directed by the Departmental Representative.
- .10     Notify the Departmental Representative, in writing, when resubmitting, of any revisions other than those requested by the Departmental Representative.

**1.2                SUBMISISON REQUIREMENTS**

- .1      Coordinate each submission with requirements of work and Contract Documents. Individual submissions will not be reviewed until all related information is available.
- .2      Allow 7 days for Departmental Representative's review of each submission.
- .3      Adjustments made on submissions by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .4      Make changes in submissions as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .5      Accompany submissions with transmittal letter, in duplicate, containing:

- .1 Date.
- .2 Project title and number.
- .3 Contractor's name and address.
- .4 Identification and quantity of each shop drawing, product data and sample.
- .5 Other pertinent data.
- .6 Submissions include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name and address of:
    - .1 Subcontractor.
    - .2 Supplier.
    - .3 Manufacturer.
  - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
  - .5 Details of appropriate portions of Work as applicable:
    - .1 Fabrication.
    - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
    - .3 Setting or erection details.
    - .4 Capacities.
    - .5 Performance characteristics.
    - .6 Standards.
    - .7 Operating weight.
    - .8 Wiring diagrams.
    - .9 Single line and schematic diagrams.
    - .10 Relationship to adjacent work.
- .7 After Departmental Representative's review, distribute copies.

### **1.3 SHOP DRAWINGS**

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Where necessary or requested by the Departmental Representative, submit drawings stamped and signed by professional engineer registered or licensed in the Province of New Brunswick.
- .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 co-ordinated, regardless of Section under which

adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

- .4 Submit electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .5 Cross-reference shop drawing information to applicable portions of Contract Documents.

#### **1.4 PRODUCT DATA**

- .1 Product data: manufacturers catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.
  - .1 Submit electronic copies of product data.
- .2 Sheet size: 215 x 280 mm, maximum of 3 modules.
- .3 Delete information not applicable to project.
- .4 Supplement standard information to provide details applicable to project.
- .5 Cross-reference product data information to applicable portions of Contract Documents.

#### **1.5 SAMPLES**

- .1 Samples: examples of materials, equipment, quality, finishes, workmanship.
  - .1 Where colour, pattern or texture is criterion, submit full range of samples.
- .2 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

#### **1.6 TEST REPORTS**

- .1 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product of system to be provided has been tested in accord with specified requirements.
- .2 Testing must have been within 3 years of contract award for project.

#### **1.7 CERTIFICATES**

- .1 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
- .2 Certificates must be dated after award of project contract complete with project name.

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

- .1 Submit electronic copies of manufacturer instructions.

- .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.

## **1.9 REVIEW**

- .1 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, electronic copies will be returned and fabrication and installation or 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.
- .2 The review of shop drawings by Departmental Representative is for sole purpose of ascertaining conformance with general concept.
  - .1 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 requirements of construction and Contract Documents.
  - .2 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 sub-trades.

## **1.10 PHOTOGRAPHIC DOCUMENTATION**

- .1 Submit electronic copy of colour digital photography in jpg format, fine resolution, monthly with progress statement as directed by Departmental Representative.
- .2 Project identification: name and number of project and date of exposure indicated.
- .3 Number of viewpoints:
  - .1 Viewpoints and their location as determined by Departmental Representative.
- .4 Frequency of photographic documentation: as directed by Departmental Representative.
  - .1 Upon completion of: excavation, foundation, grading services before concealment, or as directed by Departmental Representative.

## **1.11 CERTIFICATES AND TRANSCRIPTS**

- .1 Immediately after award of Contract, submit Letter of Good Standing from WorkSafe NB.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not Used.

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**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**

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**Part 1            General**

**1.1                REFERENCES**

- .1    New Brunswick Department of Transportation
  - .1        Work Area Traffic Control Manual (most recent version)
- .2    Manual of Uniform Traffic Control Devices for Canada (MUTCD-C) – (most recent version)
- .3    New Brunswick Department of Transportation and Infrastructure Standard Specifications (most recent version):
  - .1        NBDTI Standard Specification Item 917 – Traffic Control Persons
  - .2        NBDTI Standard Specification Item 918 – Detours
  - .3        NBDTI Standard Specification Item 919 – Maintenance of Traffic Flow

**1.2                DESCRIPTION**

- .1    This section specifies requirements and procedures for traffic regulation to ensure protection of work and safety of public to satisfaction of Departmental Representative.

**1.3                FLAGPERSONS TO BE INSTRUCTED**

- .1    Contractor shall ensure that only employees who are in possession of "Flagperson's Certificate" from Workplace Health, Safety and Compensation Commission of New Brunswick are assigned to this project.

**Part 2            Products**

**2.1                TRAFFIC CONTROL DEVICES**

- .1    Barricades, signs, delineators, warning lights, electronic message board, flagperson's paddles and other devices shall be in strict accordance with the New Brunswick Department of Transportation Work Area Traffic Control Manual.
- .2    Signs, barricades, delineators and flagpersons paddles shall be as new and reflectorized to show same shape and colour by night as by day.
- .3    Signs to be bilingual or symbolic.
- .4    All detour, lane restriction, traffic control and speed restriction signs required at an individual frost heave repair site must be in place before any road excavation at that site commences.

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**Part 3            Execution**

**3.1                GENERAL**

- .1      Conduct operations as to create a minimum of inconvenience to traffic.
- .2      Provide and maintain access to and from properties adjacent to work area.
- .3      Provide traffic control through use of either an approved traffic signal system or flagpersons.
- .4      Continue using flagpersons or approved traffic signal system during period between end of working day and start of next work shift when only one lane open to traffic.
- .5      At least one week prior to commencing work, submit to Departmental Representative a traffic control signing plan. This layout shall indicate the quantity, spacing and detail of signs, to be used during construction for each work area site (including adjustments for various stages of work). A copy shall be forwarded to the Superintendent, Kouchibouguac National Park. Work shall not commence until Departmental Representative has approved layout.
- .6      Accommodating Traffic and hours of work shall be as noted in Section 01 11 05.
- .7      Take into account the effect of steep grades and curved alignment present in the work area when planning and executing traffic control measures.

**3.2                PROTECTION OF PUBLIC TRAFFIC**

- .1      Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
- .2      When working on travelled way:
  - .1      Place equipment in position to minimize interference and hazard to travelling public.
  - .2      Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
  - .3      Do not leave equipment on travelled way overnight.
- .3      Close lanes of road only after receipt of written approval from Departmental Representative.
  - .1      Before re-routing traffic erect suitable signs and devices to Work Area Traffic Control Manual.
- .4      Keep travelled way graded, free from pot holes and of sufficient width for required number of lanes of traffic.
  - .1      Provide 7 m wide minimum temporary roadway for traffic in two-way sections through Work and on detours.
  - .2      Provide 5 m wide minimum temporary roadway for traffic in one-way sections through Work and on detours.
- .5      Provide gravelled detours or temporary roads as directed by Departmental Representative to facilitate passage of traffic around restricted construction area:



- .1 Grade for detour in accordance with Section 31 24 13 - Roadway Excavation Embankment and Compaction.
- .2 Place and compact granular sub-base in accordance with Section 32 11 19 - Granular Sub-base.
- .3 Place and compact granular base in accordance with Section 32 11 23 - Aggregate Base Courses.

### **3.3 TRAFFIC INTERRUPTIONS**

- .1 Provide electronic message boards at both entrances to the parkway to provide public traffic of the ongoing construction.
- .2 Period and timing of any traffic Interruptions greater than 15 minutes must have prior approval of the Departmental Representative.

### **3.4 DETOURS**

- .1 Construct and maintain detour roads as may be required up to a maximum of 10% grade.

### **3.5 SIGNS AND BARRICADES**

- .1 Provide, erect and maintain necessary barricades, suitable and sufficient flashing warning lights, danger signals and other signs.
- .2 Placement and erection of signs, barricades, delineators and warning lights and other devices to be in strict accordance with the Work Area Traffic Control Manual, Department of Transportation, Province of New Brunswick.
- .3 Remove or cover signs which do not apply to existing conditions.
- .4 Check devices daily for damage, legibility and correct positioning. Repair, replace or reposition as required or as directed by Departmental Representative.

### **3.6 SPEED ZONES**

- .1 Speed zone signing within a construction zone shall be:
  - .1 50 km/h when no construction is under way.
  - .2 30 km/h when construction is under way on the roadway or construction traffic is crossing the roadway.
- .2 There will be strict enforcement of the Speed limits by the RCMP, Environmental Protection Officer and Parks Canada Warden Service.

### **3.7 FLAGPERSONS**

- .1 Provide flagpersons when:
  - .1 Traffic is required to pass working vehicles or equipment liable to block any portion of travelled way.
  - .2 It is necessary to initiate a one-way traffic system past or through construction area when traffic volumes are high, approach speed high and traffic signal system not used.

- .3 Workers or equipment are employed on travelled way over brow of hill, around sharp curve or at any location where oncoming traffic would not have adequate advance warning of their presence.
- .4 In high-speed, high-volume areas where temporary protection is required while other traffic control devices are being erected or taken down.
- .5 Other traffic control devices not readily available.
- .6 Complete protection for both workers and public is not provided by other means.
- .2 Ensure flagpersons are conversant with situation necessitating delay and are ready to explain reason and approximate duration to affected public.
- .3 Ensure flagpersons are neat in appearance, perform their duties in courteous and diligent manner and are aware of importance in protection of workers and general public.
- .4 Equip each flagperson with:
  - .1 Hard hat.
  - .2 Flagperson's paddle consisting of a diamond shape, displaying a red stop sign on a white background facing in direction in which traffic is to stop. Reverse side shall be a yellow diamond. Paddle shall be reflectorized to show same shape and colour by night as by day.
  - .3 Blaze red or blaze orange flagpersons' vest or jacket. For flagging during hours of darkness, flagpersons' vest or jacket shall have reflectorized vertical white stripes, at least two of which are visible on front and two on back of garment.
  - .4 For flagging during hours of darkness, a flashlight fitted with a red signalling baton of type similar to those used by Police.
  - .5 A means of communication for each team of flagpersons (field telephones, two-way radios, etc.) where two ends of a restricted section are not intervisible.
- .5 Place RTAC WD-A45 "Flagman" sign ahead of each flagperson station. Where a single flagperson is required to control a straight one-way section, place "Flagman" signs for both directions of travel.
- .6 Ensure "Flagman" signs are covered or removed when flagging discontinued.
- .7 Locate flagperson stations no closer than 20 m from work area.
- .8 Ensure flagpersons are familiar with and follow standard flagging procedures:
  - .1 Give signals in clear precise manner to avoid confusion which may develop in mind of travelling public as to meaning of signals given.
  - .2 Stand in a safe position, preferably on centreline where flagperson, paddle and other devices will be clearly visible and where flagperson has unobstructed view of approaching traffic.
  - .3 To stop traffic in daylight, face approaching traffic and extend left arm horizontally across traffic lane with paddle held in upright position and with "Stop" side facing approaching traffic. For greater emphasis, raise right arm with open palm toward approaching traffic. In darkness, supplement paddle with flashlight, with red baton attached, held in right hand with arm extended horizontally at right angle to approaching traffic.

- .4 To slow traffic in daylight, extend left arm horizontally across traffic lane with paddle held in upright position and with yellow side facing approaching traffic. For emphasis extend right arm horizontally away from body with palm facing down, and move slowly up and down through a small arc at right angles to traffic. In darkness assume same position with flashlight, with red baton attached, held in right hand.
- .5 If above procedure results in traffic slowing below required speed, flagperson turns and faces across traffic lane and looks over right shoulder at traffic to be directed. In daylight, extend right arm and move arm in an elliptical manner corresponding to rotation and direction of vehicle wheels. Extend left arm forward across traffic lane, with paddle held upright and yellow side facing traffic to be directed. In darkness take same position but with flashlight, with red baton attached, in right hand.
- .6 To keep traffic moving at prevailing speed limit, stand facing across traffic lane, extend right arm and move in an elliptical manner corresponding to rotation and direction of vehicle wheels. Lower paddle held in left hand behind flagperson's leg farthest from approaching traffic. In darkness use flashlight, with red baton attached, in right hand.
- .7 Signal to proceed or proceed slowly may also be given verbally after stopping traffic.
- .8 Never use flagperson's paddle to wave traffic on, or display in other than static position.
- .9 Where two flagpersons are working as a team at opposite ends of a restriction, one flagperson shall be designated as Chief Flagperson for purpose of coordinating traffic movements. Chief Flagperson shall initiate changes in directional flow of traffic and determine duration of each cycle. Where visual signals are used between themselves to assign changes in traffic movements, such signals shall be predetermined and not be such as to be mistaken as traffic flagging signals by public.

### **3.8 TRAFFIC ACCOMODATION PERSON**

- .1 The Contractor shall provide for services 24 hrs per day.
- .2 Major responsibilities of the traffic accommodation person:
  - .1 Maintain traffic control devices and signs during regular shutdown on weekends and at night throughout the week.
  - .2 Clean signs, flares, barricades, etc. used to control and accommodate traffic.
- .3 Assist the travelling public the event of an emergency.
- .4 Contact proper authorities in the event of an emergency, i.e., Contractor's Supervisor, Park Warden, and Departmental Representative.

**END OF SECTION**

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**Part 1            General**

**1.1                REFERENCES**

- .1      Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2      Province of New Brunswick
  - .1          Occupational Health and Safety Act, S.N.B. - (most recent version)

**1.2                DEFINITIONS**

- .1      COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2      Competent Person: means a person who is:
  - .1          Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
  - .2          Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
  - .3          Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .3      Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .4      PPE: personal protective equipment
- .5      Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.

**1.3                SUBMITTALS**

- .1      Make submittals in accordance with Section 01 33 00 – Submittal Procedures.
- .2      Submit site-specific Health and Safety Plan prior to commencement of Work.
  - .1          Submit within 10 work days of notification of Bid Acceptance. Provide 3 copies.
  - .2          Departmental Representative will review Health and Safety Plan and provide comments.
  - .3          Revise the Plan as appropriate and resubmit within 5 work days after receipt of comments.
  - .4          Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
  - .5          Submit revisions and updates made to the Plan during the course of Work.

- .3 Submit name of designated Health & Safety Site Representative and support documentation specified in the Safety Plan.
- .4 Submit building permit, compliance certificates and other permits obtained.
- .5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other department of labour organization.
  - .1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.
- .6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit copies of incident reports.
- .8 Submit WHMIS MSDS - Material Safety Data Sheets.

#### **1.4 COMPLIANCE REQUIREMENTS**

- .1 Comply with Occupational Health and Safety Act for Province of New Brunswick, and Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code - Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.
  - .1 The Canada Labour Code can be viewed at: [www.http://laws.justice.gc.ca/en/L-2/](http://laws.justice.gc.ca/en/L-2/)
  - .2 COSH can be viewed at: [www.http://laws.justice.gc.ca/eng/SOR-86-304/ n e .html](http://laws.justice.gc.ca/eng/SOR-86-304/n e .html)
- .3 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .4 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.
- .5 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

#### **1.5 RESPONSIBILITY**

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.

#### **1.6 SITE CONTROL AND ACCESS**

- .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.

- .1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.
- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
  - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment.
  - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
  - .3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.
- .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site.
- .4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct tests or perform inspections.
- .5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm. Provide security guard where adequate protection cannot be achieved by other means.

## **1.7 PROTECTION**

- .1 Give precedence to safety and health of persons and protection of environment over cost and schedule considerations for Work.
- .2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

## **1.8 FILING OF NOTICE**

- .1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work.
  - .1 Departmental Representative will assist in locating address if needed.

## **1.9 PERMITS**

- .1 Post permits, licenses and compliance certificates, at Work Site.
- .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.

## **1.10 HAZARD ASSESSMENTS**

- .1 Perform site specific health and safety hazard assessment of the Work and its site.

- .2 Carryout initial assessment prior to commencement of Work with further assessments as needed during progress of work, including when new trades and subcontractors arrive on site.
- .3 Record results and address in Health and Safety Plan.
- .4 Keep documentation on site for entire duration of the Work.

#### **1.11 PROJECT / SITE CONDITIONS**

- .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
  - .1 Known latent site and environmental conditions:
    - .1 Working near watercourse.
    - .2 Working on steep or uneven ground.
    - .3 Electrical safety required.
    - .4 Working with adverse weather conditions.
    - .5 Working near trench excavations.
    - .6 Working near Public traffic.
    - .7 Working near trees and overhead obstructions.
    - .8 Working near buried utilities.
    - .9 Working near heavy moving machinery.
  - .2 Facility on-going operations:
    - .1 The Contractor will co-operate with users of existing facilities. Maintain access to the existing park facilities and consult with the Departmental Representative for site access limitations.
  - .3 Should interference occur, take directions from Departmental Representative.
  - .4 Do not unreasonably encumber site with materials.
  - .5 Move stored products or equipment which interfere with operations.
  - .6 Comply with all regulations and authorities having jurisdiction over the work.
- .2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards encountered during Work.
- .3 Include above items in the hazard assessment of the Work.
- .4 MSDS Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

#### **1.12 MEETINGS**

- .1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
  - .1 Superintendent of Work
  - .2 Designated Health & Safety Site Representative
  - .3 Subcontractors

- .2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety regulations.
- .3 Keep documents on site.

### **1.13 HEATHER AND SAFETY PLAN**

- .1 Prior to commencement of Work, develop written Health and Safety Plan specific to the Work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.
- .2 Health and Safety Plan shall include the following components:
  - .1 List of health risks and safety hazards identified by hazard assessment.
  - .2 Control measures used to mitigate risks and hazards identified.
  - .3 On-site Contingency and Emergency Response Plan as specified below.
  - .4 On-site Communication Plan as specified below.
  - .5 Name of Contractor's designated Health & Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
  - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.
- .3 On-site Contingency and Emergency Response Plan shall include:
  - .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
  - .2 Evacuation Plan: site plan layouts showing marshalling areas. Details on alarm notification methods, location of firefighting equipment and other related data.
  - .3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.
  - .4 Emergency Contacts: name and telephone number of officials from:
    - .1 General Contractor and subcontractors.
    - .2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
    - .3 Local emergency resource organizations.
  - .5 Harmonize Plan with Facility's Emergency Response and Evacuation Plan. Departmental Representative will provide pertinent data including name of PWGSC and Facility Management contacts.
- .4 On-site Communication Plan:
  - .1 Procedures for sharing of work related safety information to workers and subcontractors, including emergency and evacuation measures.
  - .2 List of critical work activities to be communicated with Facility Manager which have a risk of endangering health and safety of Facility users.
- .5 Address all activities of the Work including those of subcontractors.



- .6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever new trade or subcontractor arrive at Work Site.
- .7 Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.
- .8 Post copy of the Plan, and updates, prominently on Work Site.

#### **1.14 SAFETY SUPERVISION**

- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.
- .2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
  - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work
  - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
  - .3 Conduct site safety orientation session to persons granted access to Work Site.
  - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
  - .5 Stop the Work as deemed necessary for reasons of health and safety.
- .3 Health & Safety Site Representative must:
  - .1 Be qualified and competent person in occupational health and safety.
  - .2 Have site-related working experience specific to activities of the Work.
  - .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:
  - .1 Conduct regularly scheduled safety inspections of the Work on a minimum bi-weekly basis. Record deficiencies and remedial action taken.
  - .2 Conduct Formal Inspections on a minimum monthly basis. Use standardized safety inspection forms. Distribute to subcontractors.
  - .3 Follow-up and ensure corrective measures are taken.
- .6 Cooperate with Facility's Occupational Health and Safety representative should one be designated by Departmental Representative.
- .7 Keep inspection reports and supervision related documentation on site.

#### **1.15 TRAINING**

- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and safety procedures and practices pertinent to their assigned task.

- .2 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
- .3 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.

#### **1.16 MINIMUM SITE SAFETY RULES**

- .1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; ensure the following minimum safety rules are obeyed by persons granted access to Work Site:
  - .1 Wear appropriate PPE pertinent to the Work or assigned task; minimum being hard hat, safety footwear, safety glasses and hearing protection.
  - .2 Immediately report unsafe condition at site, near-miss accident, injury and damage.
  - .3 Maintain site and storage areas in a tidy condition free of hazards causing injury.
  - .4 Obey warning signs and safety tags.
- .2 Brief persons of disciplinary protocols to be taken for noncompliance. Post rules on site.

#### **1.17 CORRECTION OF COMPLIANCE**

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

#### **1.18 INCIDENT REPORTING**

- .1 Investigate and report the following incidents to Departmental Representative:
  - .1 Incidents requiring notification to Provincial Department of Occupational Safety and Health, Workers Compensation Board or to other regulatory Agency.
  - .2 Medical aid injuries.
  - .3 Property damage in excess of \$10,000.00,
  - .4 Interruptions to Facility operations resulting in an operational loss to a Federal Department in excess of \$5000.00.
- .2 Submit report in writing.

#### **1.19 HAZARDOUS PRODUCTS**

- .1 Comply with requirements of Workplace hazardous Materials Information System (WHMIS).
- .2 Keep MSDS data sheets for all products delivered to site.

- .1 Post on site.
- .2 Submit copy to Departmental Representative.
- .3 For interior work in an occupied Facility, post additional copy in one or more publicly accessible locations.

**1.20 BLASTING**

- .1 Blasting or other use of explosives is not permitted on site without prior receipt of written permission and instructions from Departmental Representative.

**1.21 CONFINED SPACES**

- .1 Abide by occupational health and safety regulations regarding work in confined spaces.
- .2 Obtain an Entry Permit in accordance with Part XI of the Canada Occupational Health and Safety Regulations for entry into an existing identified confined space located at the Facility or premises of Work.
  - .1 Obtain permit from Facility Manager
  - .2 Keep copy of permit issued.
- .3 Safety for Inspectors:
  - .1 Provide PPE and training to Departmental Representative and other persons who require entry into confined space to perform inspections.
  - .2 Be responsible for efficacy of equipment and safety of persons during their entry and occupancy in the confined space.

**1.22 SITE RECORDS**

- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
- .2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.

**1.23 POSTING OF DOCUMENTS**

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on Work Site in accordance with Acts and Regulations of Province having jurisdiction.
- .2 Post other documents as specified herein, including:
  - .1 Site specific Health and Safety Plan
  - .2 WHMIS data sheets
- .3 Fire and Safety Requirements
- .4 Special Procedures on Lockout Requirements

**END OF SECTION**

**Part 1 General**

**1.1 STANDARD**

- .1 All work of this section shall comply with the requirement of the most recent version of the NBDTI Standard Specification Item 948, except as amended herein.

**1.2 REFERENCES**

- .1 New Brunswick Department of Transportation and Infrastructure Standard Specifications (most recent version):
  - .1 NBDTI Standard Specification Item 948 – Environmental Requirements
    - .1 Add
      - .1 948.2.1.1 - The Environmental Management Manual (EMM) is posted on and can be downloaded from the NBDTI website. Please telephone (506) 453-3939 for the purchase of printed copies of the Manual or for information on EMM training.

**1.3 FIRES**

- .1 Fires and burning of rubbish on site is not permitted.

**1.4 DISPOSAL OF WASTES**

- .1 Dispose of waste material in designated waste disposal area.
- .2 Remove and dispose of containers and waste fluids associated with vehicle maintenance in a provincially approved waste disposal site outside the park.
- .3 Disposal of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers is prohibited. Dispose of all water materials at Provincially approved waste disposal site outside the park boundary. Littering is prohibited.
- .4 All asphaltic concrete, gravels and other materials excavated from the roadway and surplus to road construction requirements shall be disposed of outside Park Boundaries. List of disposal site(s) must be forwarded to the Superintendent, Kouchibouguac National Park.
- .5 To the maximum extent possible, divert waste cardboard, plastic and metal products from landfill to appropriate recycling facilities.

**1.5 DRAINAGE**

- .1 Provide temporary drainage and pumping required to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

## **1.6 SITE CLEARING AND PLANT PROTECTION**

- .1 Exercise special care to protect trees, shrubs and vegetation within contract limit lines outlined on drawings or as directed by Departmental Representative.
- .2 Protect roots of designated trees to drip line during excavation and site grading to prevent disturbance or damage.
  - .1 Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .3 Minimize stripping of topsoil and vegetation, especially in the vicinity of stream banks
- .4 Restrict tree removal to areas indicated or designated by Departmental Representative.
- .5 When, in the opinion of the Departmental Representative/Park Environmental Protection Officer (EPO), negligence on the part of the Contractor results in unnecessary damage or destruction of vegetation, or other environmental or aesthetic features within or beyond the staked or designated work area, the Contractor shall be responsible, at its expense, for the complete restoration including the replacement of trees, shrubs, grass, etc. to the satisfaction of the Departmental Representative.

## **1.7 EROSION AND SEDIMENT CONTROL**

- .1 All measures necessary to minimize erosion and the mitigation of sediment shall be provided as required or as directed by the Departmental Representative.
- .2 Labour, equipment and materials to be provided and will be considered as incidental to the work, except for payment items specifically identified in the unit price table.

## **1.8 WORK ADJACENT TO WATERWAYS**

- .1 The Contractor is required to install, inspect and maintain in good working order temporary erosion, siltation and pollution control features, as directed by Departmental Representative. These devices are to be removed in proper manner upon completion of project.
- .2 Do not use waterway beds for borrow material.
- .3 Do not dump excavated fill, waste material or debris
- .4 Do not skid logs or construction materials across waterways.
- .5 Do not operate construction equipment in waterways.
- .6 Works performed in and around waterways will be carried out in accordance with regulations of authorities having jurisdiction.
- .7 Cuts and fills adjacent to waterways are to be stabilized, and ditch run-outs constructed to prevent entry of silt into waterways. In vicinity of stream banks, maintain as much of the existing vegetation as possible.
- .8 On conclusion of construction, debris must be disposed of to prevent its entry into waterways and stream beds returned to its original configuration.

## **1.9 POLLUTION CONTROL**

- .1 Maintain temporary erosion and pollution control features installed under this Contract.

- .2 Control emissions from equipment and plant in accordance with local authorities' emission requirements.
- .3 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.
- .4 All equipment, vehicles and plant used on site must be in good operating condition and leak free. The Departmental Representative reserves the right to have the Contractor immediately remove from the site, any deficient equipment, vehicles, etc.
- .5 There will be a Canadian Park Service Environmental Protection Officers on site to undertake overall environmental surveillance of this project.

#### **1.10 VEHICULAR MOVEMENTS**

- .1 Restrict movement of vehicles and equipment to existing disturbed areas (access roads, borrow pits, disposal areas and right-of-ways).

#### **1.11 STORAGE AND HANDLING OF FUELS AND DANGEROUS FLUIDS**

- .1 Locate fuel storage facility outside Park and minimum of 100 m from any water body. Any fuel storage tankage (s) used shall be of adequate double-walled safety construction and shall be enclosed by an impermeable containment dyking system with a volume capacity equal to at least 110% of fuel storage tank (s)' fuel storage capacity. Any spillage and/or ponded fuel shall be immediately recovered and placed in secure containers. When no longer required, the fuel storage area shall be cleaned up to satisfaction of the Departmental Representative and any fuel contaminated soil removed to the nearest approved industrial waste disposal site.
  - .1 Fuelling of vehicles or equipment will not be permitted within 100 m of any water body.
  - .2 Exercise care in handling of fuels to minimize potential for fuel spills. Report immediately any fuel spills to Departmental Representative. Contractor is responsible for any cleanup or repair resulting from any spills.
  - .3 Supply and maintain on site emergency response material to contain spills and minimize environmental damage, i.e. absorbent material, to the approval of Departmental Representative. Disposal of all contaminated material as per Clause 1.4 of this section.

#### **1.12 EROSION CONTROL**

- .1 Sediment fences shall be constructed in roadside ditches or at culvert inverts prior to any excavation as directed by Departmental Representative.
- .2 To minimize run-off, work on slopes which may affect water bodies will be curtailed during periods of heavy rainfall, as directed by the Departmental Representative.

#### **1.13 ENVIRONMENTAL PROTECTION PLAN**

- .1 The Contractor is required to submit a plan showing all pollution control measures that will be used to fulfill the requirements of the Environmental Protection Section and Environmental Screening attached to this document. This plan will be reviewed by the Departmental Representative and the Environmental Protection Officer prior to

commencement of any work. Any deviation from this plan will require further approval by the Departmental Representative. The protection plan shall be submitted prior to the pre-construction meeting.

- .2 The Environmental Plan will outline how the Contractor will address the environmental protection requirements, including removal and installation of culverts, and ensure pollution created by the construction is controlled. It will show sufficient detail on products to be used and physical placement on site to determine effectiveness of these items.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES AND CODES**

- .1        Perform Work in accordance with National Building Code of Canada (NBC) including amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2        Meet or exceed requirements of:
  - .1            Contract documents.
  - .2            Specified standards, codes and referenced documents.

**1.2                NATIONAL PARKS ACT**

- .1        Perform Work in accordance with National Parks Act when projects are located within boundaries of National Park.

**Part 2            Products**

**2.1                NOT USED**

- .1        Not Used.

**Part 3            Execution**

**3.1                NOT USED**

- .1        Not Used.

**END OF SECTION**



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**Part 1            General**

**1.1                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 will order 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. If such Work is found in accordance with Contract Documents, Departmental Representative shall pay cost of examination and replacement.

**1.2                INDEPENDENT INSPECTION AGENCIES**

- .1      Independent Inspection/Testing Agencies will be engaged by 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 Departmental Representative at no cost to the owner. Pay costs for retesting and reinspection.

**1.3                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.

**1.4                PROCEDURES**

- .1      Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2      Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3      Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

**1.5 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 will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Owner.

**1.6 REPORTS**

- .1 Submit 4 copies of inspection and test reports to Departmental Representative.
- .2 Provide copies to subcontractor of work being inspected or tested or manufacturer or fabricator of material being inspected or tested.

**1.7 TESTS AND MIX DESIGNS**

- .1 Furnish test results and mix designs as requested.
- .2 Cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work will be appraised by Departmental Representative and may be authorized as recoverable.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 ACCESS**

- .1 Provide and maintain adequate access to project site.
- .2 Build and maintain temporary roads during period of work. PWGSC and Parks Canada must approve prior to their use, any proposed temporary roads within the Park.
- .3 Upon completion of contract work, rehabilitate any temporary roads to the satisfaction of the Departmental Representative.
- .4 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractor's use of roads.
- .5 Clean roads and parking areas where used by Contractor's equipment or employees' vehicles.

**1.2 DEPARTMENTAL REPRESENTATIVE'S SITE OFFICE**

- .1 Contractor to provide Departmental Representative's office trailer/space. Minimum office trailer/space size is 3.0 m x 12.5 m.
- .2 Contractor to provide laboratory space for the Departmental Representative at the Asphalt Plant.
- .3 Insulate building and provide heating system to maintain 22 degrees C inside temperature at -20 degrees C outside temperature.
- .4 Finish inside walls and ceiling with plywood, hardboard or wallboard and paint in selected colours. Finish floor with 19 mm thick plywood.
- .5 Install electrical lighting system to provide min 750 lx using surface mounted, shielded commercial fixtures with 10% upward light component.
- .6 Contractor to arrange and pay for fax machine, internet connection and photocopier in Departmental Representative's office for its exclusive use. Long distance calls placed on this phone and fax will be paid by Departmental Representative. Paper for photocopier and fax to be paid for by Departmental Representative.
- .7 Contractor to equip office with two 1 m x 2 m tables, one 1 m x 2 m drafting table, 4 chairs, 6 m of shelving 300 mm wide, one 3 drawer filing cabinet, one plan rack and one coat rack and shelf.
- .8 Upon completion of the Contract; all equipment and furniture provided by the Contractor shall be returned to it.
- .9 Supply of the Departmental Representative's office, supplies and services will be incidental to the work.

**1.3 SITE SIGNS**

- .1 Project Identification Site Signs:

- .1 Provide 2 project identification site signs comprising foundation, framing, and 1200 x 2400 mm signboard as detailed and as described below
  - .1 Framework & Battens: Select Structural White Spruce, Douglas Fir or Western Red Cedar, dressed 4 sides.
  - .2 Signboard: 19 mm Medium Density Overlaid Douglas Fir Plywood to CSA 0121-M1978.
  - .3 Paint: alkyd type, without silicone additives. Primer to CGSB1-GP-189M+Amdt-Aug-84, enamel to CGSB 1-GP-59M+Amdt-Aug-84.
  - .4 Fasteners: hot-dip galvanized steel nails.
  - .5 Vinyl sign face: printed project identification, self adhesive, vinyl film overlay, supplied by Departmental Representative .
- .2 Locate project identification signs as directed by Departmental Representative and construct as follows:
  - .1 Erect framework, and attach signboard to framing as indicated.
  - .2 Paint all surfaces of signboard and framing with one coat primer and two coats enamel. Colour white on signboard face, black on other surfaces.
  - .3 Apply vinyl sign face overlay to painted signboard face in accordance with installation instruction supplied.
- .3 Safety and Instruction Signs and Notices:
  - .1 Signs and notices for safety and instruction shall be in both official languages Graphic symbols shall conform to CAN3-Z321-77.
  - .2 Maintenance and Disposal of Site Signs:
    - .1 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.
    - .2 No separate payment to be made for Project Identification Site Signs. Cost shall be deemed incidental to work.

#### **1.4 SANITARY FACILITIES**

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

#### **1.5 PARKING**

- .1 Parking space for work force will be limited to the construction limits for each area under construction.

#### **1.6 REMOVAL OF TEMPORARY FACILITIES**

- .1 Remove temporary facilities from site when directed by Departmental Representative.

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**1.7 CONTRACTOR'S CAMP**

- .1 The Contractor will not be permitted to set up a camp within Kouchibouguac National Park.
  - .1 Applicable Provincial and/or Municipal regulatory permits for camp(s) outside the Park must be obtained and copies forwarded to Superintendent, Kouchibouguac National Park.

**1.8 MEASUREMENT FOR PAYMENT**

- .1 Unless specifically stated otherwise, items under this section not be measured for payment but are considered incidental to Contract.

**END OF SECTION**

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**Part 1            General**

**1.1                INSTALLATION AND REMOVAL**

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

**1.2                HOARDING**

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

**1.3                GUARD RAILS AND BARRICADES**

- .1      Provide secure, rigid guard rails and barricades around deep excavations.
- .2      Provide as required by governing authorities.

**1.4                ACCESS TO SITE**

- .1      Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.
- .2      The trail will be closed to all visitors during the construction period within the Work area. Signage will be required at either end of the trail system to advise visitors of this closure.

**1.5                PUBLIC TRAFFIC FLOW**

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

**1.6                FIRE ROUTES**

- .1      Maintain access to property including overhead clearances for use by emergency response vehicles.

**1.7                PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY**

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

**1.8                WASTE MANAGEMENT AND DISPOSAL**

- .1      Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

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**Part 2            Products**

**2.1                NOT USED**

.1            Not Used.

**Part 3            Execution**

**3.1                GENERAL**

.1            To ensure visitors' safety, the trail will be closed during periods of construction.

**END OF SECTION**

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**Part 1            General**

**1.1                REFERENCES**

- .1        Within text of each specifications section, reference may be made to reference standards. Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .2        If there is question as to whether products or systems are in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .3        Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.

**1.2                QUALITY**

- .1        Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2        Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
- .3        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.
- .4        Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5        Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6        Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

**1.3                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 sheet materials on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .5 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.

#### **1.4 TRANSPORTATION**

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Departmental Representative. Unload, handle and store such products.

#### **1.5 MANUFACTURER'S INSTRUCTIONS**

- .1 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.
- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative will establish course of action.
- .3 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.

#### **1.6 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.

#### **1.7 CO-ORDINATION**

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

#### **1.8 REMEDIAL WORK**

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate 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.

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**1.9                    EXISTING UTILITIES**

- .1        When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants and pedestrian and vehicular traffic.
- .2        Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

**Part 2                Products**

**2.1                   NOT USED**

- .1        Not Used.

**Part 3                Execution**

**3.1                   NOT USED**

- .1        Not Used.

**END OF SECTION**

**Part 1            General**

- .1      Owner's identification of existing survey control points and property limits as identified on the drawings.

**1.2                QUALIFICATIONS OF SURVEYOR**

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

**1.3                SURVEY REFERENCE POINTS**

- .1      Existing base horizontal and vertical control points are designated 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.

**1.4                SURVEY REQUIREMENTS**

- .1      Establish two permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .2      Establish lines and levels, locate and lay out, by instrumentation.
- .3      Stake for grading, fill and topsoil placement and landscaping features.
- .4      Stake slopes and berms.
- .5      Establish pipe invert elevations.

**1.5                EXISTING SERVICES**

- .1      Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.
- .2      Remove abandoned service lines within 2 m of structures. Cap or otherwise seal lines at cut-off points as directed by Departmental Representative.

**1.6                LOCATION OF EQUIPMENT AND FIXTURES**

- .1      Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.

- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

**1.7 RECORDS**

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

**1.8 ACTION AND INFORMATIONAL 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 and noting those elevations and locations of completed Work that conform and do not conform with Contract Documents.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

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**Part 1            General**

**1.1                REFERENCES**

- .1      Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC) – ID: R0202D, Title: General Conditions “C”, In Effect as Of: May 14, 2004.

**1.2                PROJECT CLEANLINESS**

- .1      Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2      Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .3      Clear snow and ice from access to site or facilities of the work, bank/pile snow in designated areas only.
- .4      Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5      Provide suitable on-site containers for collection of waste materials and debris.
- .6      Provide and use marked separate bins for recycling. Refer to Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .7      Dispose of waste materials and debris outside the limits of the National Park at a location/facility approved by the Authority having jurisdiction..
- .8      Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .9      Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

**1.3                FINAL CLEANING**

- .1      When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2      Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3      Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4      Remove waste products and debris other than that caused by Owner or other Contractors.
- .5      Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.

- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .8 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .9 Remove dirt and other disfiguration from exterior surfaces.

**1.4 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 WASTE MANAGEMENT GOALS**

- .1 Prior to start of Work conduct meeting with Departmental Representative to review and discuss PWGSC's waste management plan and goals.
- .2 Accomplish maximum control of solid construction waste.
- .3 Protect environment and prevent environmental pollution damage.

**1.2 REFERENCES**

- .1 Definitions:
  - .1 Class III: non-hazardous waste - construction renovation and demolition waste.
  - .2 Cost/Revenue Analysis Workplan (CRAW): based on information from Waste Reduction Workplan, and intended as financial tracking tool for determining economic status of waste management practices.
  - .3 Demolition Waste Audit (DWA): relates to actual waste generated from project.
  - .4 Inert Fill: inert waste - exclusively asphalt and concrete.
  - .5 Materials Source Separation Program (MSSP): consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
  - .6 Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse.
  - .7 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
  - .8 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
  - .9 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
    - .1 Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
    - .2 Returning reusable items including pallets or unused products to vendors.
  - .10 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
  - .11 Separate Condition: refers to waste sorted into individual types.
  - .12 Source Separation: act of keeping different types of waste materials separate beginning from the point they became waste.
  - .13 Waste Audit (WA): detailed inventory of estimated quantities of waste materials that will be generated during construction, demolition, deconstruction and/or renovation. Involves quantifying by volume/weight amounts of materials and wastes that will be reused, recycled or landfilled. Refer to Schedule A.

- .14 Waste Management Co-ordinator (WMC): contractor representative responsible for supervising waste management activities as well as co-ordinating required submittal and reporting requirements.
- .15 Waste Reduction Workplan (WRW): written report which addresses opportunities for reduction, reuse, or recycling of materials generated by project. Specifies diversion goals, implementation and reporting procedures, anticipated results and responsibilities. Waste Reduction Workplan information acquired from Waste Audit.

### **1.3 DOCUMENTS**

- .1 Post and maintain in visible and accessible area at job site, one copy of following documents:
  - .1 Waste Reduction Workplan.

### **1.4 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prepare and submit following prior to project start-up:
  - .1 1 copy and 1 electronic copy of completed Waste Reduction Workplan (WRW):
- .3 Prepare and submit on weekly basis, throughout project or at intervals agreed to by Departmental Representative the following:
  - .1 Receipts, scale tickets, waybills, and/or waste disposal receipts that show quantities and types of materials reused, recycled, or disposed of.
  - .2 Written bi-weekly summary report detailing cumulative amounts of waste materials reused, recycled and landfilled, and brief status of ongoing waste management activities.

### **1.5 WASTE REDUCTION WORKPLAN (WRW)**

- .1 Prepare and submit WRW at least 10 days prior to project start-up.
- .2 WRW identifies strategies to optimize diversion through reduction, reuse, and recycling of materials and comply with applicable regulations.
- .3 WRW should include but not limited to:
  - .1 Applicable regulations.
  - .2 Specific goals for waste reduction, identify existing barriers and develop strategies to overcome them.
  - .3 Destination of materials identified.
  - .4 Methods to collect, separate, and reduce generated wastes.
  - .5 Location of waste bins on-site.
  - .6 Security of on-site stock piles and waste bins.
  - .7 Protection of personnel, sub-contractors.
  - .8 Clear labelling of storage areas.
  - .9 Details on materials handling and removal procedures.



- .10 Recycler and reclaimer requirements.
- .11 Quantities of materials to be salvaged for reuse or recycled and materials sent to landfill.
- .12 Requirements for monitoring on-site wastes management activities.
- .4 Structure WRW to prioritize actions and follow 3R's hierarchy, with Reduction as first priority, followed by Reuse, then Recycle.
- .5 Post WRW or summary where workers at site are able to review content.
- .6 Monitor and report on waste reduction by documenting total volume (in tonnes) and cost of actual waste removed from project.

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

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Protect, stockpile, store and catalogue salvaged items.
- .3 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .4 Protect surface drainage, mechanical and electrical from damage and blockage.
- .5 Separate and store materials produced during project in designated areas.
- .6 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated processing facilities.
  - .1 On-site source separation is recommended.
  - .2 Remove co-mingled materials to off site processing facility for separation.
  - .3 Obtain waybills, receipts and/or scale tickets for separated materials removed from site.
  - .4 Materials reused on-site are considered to be diverted from landfill and as such are to be included in all reporting.

## **1.7 DISPOSAL OF WASTES**

- .1 Do not bury rubbish or waste materials.
- .2 Do not dispose of waste, volatile materials, mineral spirits, oil, paint thinner into waterways, storm, or sanitary sewers.

## **1.8 SCHEDULING**

- .1 Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**

**Part 1 General**

- .1 Canadian Environmental Protection Act (CEPA)
  - .1 SOR/2008-197, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.

**1.2 ADMINISTRATIVE REQUIREMENTS**

- .1 Acceptance of Work Procedures:
  - .1 Contractor's Inspection: Contractor: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
    - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
    - .2 Request Departmental Representative inspection.
  - .2 Departmental Representative Inspection:
    - .1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
    - .2 Contractor to correct Work as directed.
  - .3 Completion Tasks: submit written certificates that tasks have been performed as follows:
    - .1 Work: completed and inspected for compliance with Contract Documents.
    - .2 Defects: corrected and deficiencies completed.
    - .3 Equipment and systems: tested, adjusted and balanced and fully operational.
    - .4 Operation of systems: demonstrated to Owner's personnel.
    - .5 Work: complete and ready for final inspection.
  - .4 Final Inspection:
    - .1 When completion tasks are done, request final inspection of Work by Departmental Representative, and Contractor.
    - .2 When Work incomplete according to Departmental Representative, complete outstanding items and request re-inspection.

**1.3 FINAL CLEANING**

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
- .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

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**Part 2            Products**

**2.1                NOT USED**

.1            Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**

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**Part 1            General**

**1.1            ADMINISTRATIVE REQUIREMENTS**

- .1    Pre-warranty Meeting:
  - .1    Convene meeting one week prior to contract completion with contractor's representative and Departmental Representative, in accordance with Section 01 31 19 - Project Meetings to:
    - .1    Verify Project requirements.
    - .2    Review warranty requirements and manufacturer's installation instructions.
  - .2    Departmental Representative to establish communication procedures for:
    - .1    Notifying construction warranty defects.
    - .2    Determine priorities for type of defects.
    - .3    Determine reasonable response time.
  - .3    Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
  - .4    Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

**1.2            ACTION AND INFORMATIONAL SUBMITTALS**

- .1    Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2    Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, four final copies of operating and maintenance manuals.
- .3    Provide evidence, if requested, for type, source and quality of products supplied.

**1.3            FORMAT**

- .1    Organize data as instructional manual.
- .2    Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3    When multiple binders are used correlate data into related consistent groupings.
  - .1    Identify contents of each binder on spine.
- .4    Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5    Arrange content by systems, under Section numbers and sequence of Table of Contents.
- .6    Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7    Text: manufacturer's printed data, or typewritten data.

- .8 Drawings: provide with reinforced punched binder tab.
  - .1 Bind in with text; fold larger drawings to size of text pages.

#### **1.4 CONTENTS - PROJECT RECORD DOCUMENTS**

- .1 Table of Contents for Each Volume: provide title of project;
  - .1 Date of submission; names.
  - .2 Addresses and telephone numbers of Consultant and Contractor with name of responsible parties.
  - .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
  - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data.
  - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.

#### **1.5 AS -BUILT DOCUMENTS AND SAMPLES**

- .1 Maintain, in addition to requirements in General Conditions, at site for Departmental Representative one record copy of:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Change Orders and other modifications to Contract.
  - .5 Reviewed shop drawings, product data, and samples.
  - .6 Field test records.
  - .7 Inspection certificates.
  - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction.
  - .1 Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.
  - .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.

- .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

## **1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS**

- .1 Record information on set of black line opaque drawings, provided by Departmental Representative.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress.
  - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
  - .1 Measured depths of elements of foundation in relation to finish first floor datum.
  - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
  - .4 Field changes of dimension and detail.
  - .5 Changes made by change orders.
  - .6 Details not on original Contract Drawings.
  - .7 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
  - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- .7 Provide digital photos, if requested, for site records.

## **1.7 EQUIPMENT AND SYSTEMS**

- .1 For each item of equipment and each system include description of unit or system, and component parts.
  - .1 Give function, normal operation characteristics and limiting conditions.
  - .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
  - .1 Include regulation, control, stopping, shut-down, and emergency instructions.

- .2 Include summer, winter, and any special operating instructions.
- .3 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .4 Provide servicing and lubrication schedule, and list of lubricants required.
- .5 Include manufacturer's printed operation and maintenance instructions.
- .6 Include sequence of operation by controls manufacturer.
- .7 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .8 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .9 Include test and balancing reports as specified in Section 01 45 00 - Quality Control.
- .10 Additional requirements: as specified in individual specification sections.

## **1.8 MATERIALS AND FINISHES**

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
  - .1 Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and weather-exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not Used.

## **Part 3 Execution**

### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**