

PART 1 - GENERAL

1.1 DESCRIPTION OF
WORK AND LIST OF
DRAWINGS

- .1 The project is located on an abandoned railway crossing near Dominion, Nova Scotia, to the east of Warburton Road. The work general involves the replacement of a timber box culvert with a new concrete culvert. More specifically, the work will include the following:
 - .1 Grubbing and excavation, as required, to remove the existing box culvert and replace it with a new 2100 diameter concrete culvert.
 - .2 Dewatering and erosion control.
 - .3 Supply and placement of the new culvert, bedding and rip-rap, to the extents shown on the drawings.
 - .4 Reinstatement of the railway embankment, as shown on the drawings.
 - .5 Disposal of excess fill materials, as directed by the Departmental Representative.
 - .6 Construction of a new ATV trail at the top of the disturbed portion of the embankment.
 - .7 Establishment of new vegetation on all disturbed slopes.
- .2 Drawing Numbers and Drawing Titles:
 - .1 C01 Plan, Profile and Section.
 - .2 C02 Plan, Sections and Details.
 - .3 C03 Sections, Details and Notes.

1.2 MAINTENANCE OF
WORK DURING
CONSTRUCTION

- .1 Maintain Work during construction. Undertake continuous and effective maintenance work day by day, with adequate equipment and forces so that the roadway or structures are continuously kept in a condition satisfactory to Departmental Representative.

1.3 CODES

- .1 Materials and workmanship must conform to or exceed applicable standards of Canadian General Standards Board (CGSB), Canadian Standards Association (CSA), American Society for Testing and Materials (ASTM) and other standards organizations.
- .2 Conform to latest revisioin of any referenced standard as re-affirmed or revised to date of specification. Standards or codes not dated shall be deemed editions in force on date of tender advertisement.

1.4 DOCUMENTS
REQUIRED

- .1 Maintain at job site, one (1) copy each of following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed drawings.
 - .5 Change orders.
 - .6 Other modifications to Contract.
 - .7 Copy of approved work schedule.
 - .8 Plan locating underground electrical/communications lines.
 - .9 All testing results.

1.5 SITE CONDITIONS

- .1 Visit the location of the crossing and review existing site conditions.

1.6 NOISE

- .1 Fit construction equipment with standard and well-maintained noise suppression devices. Construction activities are to respect appropriate time restrictions and use smaller, less disturbing equipment where possible.

1.7 AIR QUALITY

- .1 Implement an anti-idling policy for trucks and machinery.
- .2 Apply dust control measures, approved by the Departmental Representative during periods of significant dust generation.

1.8 WORK SCHEDULE

- .1 Provide to the Departmental Representative in writing and within five (5) working days after Contract award, a detailed construction schedule and traffic control plan. The schedule must show proposed work to be undertaken and anticipated completion dates for each category of Work in the Unit Price Table.
- .2 After receiving the Contractor's plan and prior to start of construction, a meeting involving the Departmental Representative will be held at a place and time to be determined by the Departmental Representative. This meeting will review implications of the contract, design, schedule of Work, methods of construction, environment protection methods and traffic control.

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| <u>1.8 WORK SCHEDULE
(Cont'd)</u> | .3 | Interim reviews of Work progress based on work schedule will be conducted as decided by Departmental Representative and schedule updated by Contractor in conjunction with and to approval of Departmental Representative. |
| | .4 | No work will begin until the pre- construction meeting is held. |
| | .5 | Following the pre-construction meeting and approval of the schedule and traffic control plan, the work will be so scheduled to meet the time restraints and have the project completed on time. |
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| <u>1.9 PARTIAL
OCCUPANCY OF USE</u> | .1 | Provide and maintain sanitary facilities for the use of workers at locations specified by the Departmental Representative. Provision of sanitary facilities shall meet requirements of provincial government and municipal statutes and authorities. |
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| <u>1.10 CONTRACTOR'S
USE OF SITE</u> | .1 | The Departmental Representative will specify the areas for work and storage. |
| | .2 | Surplus excavated material may be disposed of at adjacent CBO property as directed by the Departmental Representative. Any disposal piles will have to be shaped to promote drainage and be hydroseeded. |
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| <u>1.11 PROJECT
MEETINGS</u> | .1 | Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes. |
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| <u>1.12 SETTING OUT OF
WORK</u> | .1 | A georeferenced CAD file of the site will be provided to the Contractor for use in layout; however, the grades shown are to be considered approximate. Adjust in the field, as directed, by the Departmental Representative. |
| | .2 | Carry out all layout. |
| | .3 | Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated. |
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1.12 SETTING OUT OF
WORK
(Cont'd)

- .4 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of Work.
- .5 Provide Departmental Representative with all such site survey information as requested to confirm existing and built works geometry. Provide as built survey information upon completion.

1.13 CUTTING AND
PATCHING

- .1 Cut and patch as required to make work fit.
- .2 Where new Work connects with existing and where existing Work is altered, cut, patch and make good to match existing Work.

1.14 EXISTING
SERVICES

- .1 Carry out Work at times directed by authorities having jurisdiction, with minimum of disturbance to pedestrian and vehicular traffic.
- .2 Before commencing Work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.
- .3 Coordinate with NSPI and Bell Aliant to determine any temporary measures required for utilities presently located in the area.
- .4 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .5 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .6 Record locations of maintained, re-routed and abandoned service lines.
- .7 Maintain existing signs at all times. When it is necessary to temporarily remove a sign, it shall be dismantled and re-established on a temporary post or stand set back from construction area. The work is considered to be incidental and no separate payment will be made for maintaining or moving signs.

1.15 ADDITIONAL
DRAWINGS

- .1 Departmental Representative may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.

1.16 RELICS,
ANTIQUES AND
WILDLIFE HABITAT

- .1 Protect relics, antiquities, wildlife habitat, items of historical or scientific interest such as cornerstones and contents, animal nesting sites, commemorative plaques, inscribed tablets, and similar objects found during course of Work.
- .2 Give immediate notice to Departmental Representative and await Departmental Representative's written instructions before proceeding with work in this area.
- .3 Relics, antiquities and items of historical or scientific interest remain her Majesty's property.

1.17 PERMITS/
AUTHORITIES

- .1 Obtain and pay for permits from authorities as required for all operations and construction. Comply with all pertinent regulations of all authorities having jurisdiction over the work. Provide copies of all permits to the Departmental Representative prior to starting the Work. Be responsible for obtaining all applicable permits, inspections and approvals required and shall pay all changes in connection therewith.

PART 1 - GENERAL

1.1 MEASUREMENT
FOR PAYMENT

- .1 Unit prices are full compensation for the work necessary to complete each Item in the contract and in combination for all work necessary to complete the Work as a whole.
- .2 For each Item include all of the following as required where individual quantities are not provided in the Tender Form: all permitting; mobilization; site office; assistance to the Departmental Representative; security provisions and allowances; clearing and grubbing; traffic control; geotechnical investigation and assessment; existing conditions topographical survey; coordination of work by/with external utilities and authorities (Aliant and any others); coordination with applicable authorities of affected and/or adjacent properties; provision of temporary power, water, sanitary sewer and storm sewer services; identification and tracing of live/abandoned utilities; shoring; control of water; dewatering; compaction; disposal of surplus materials off site or at the adjacent CBO property; reinstatement of unpaved (sod, flora, soil, etc.) surfaces, and granular surfaces, and concrete curbs, preparation and submission of record drawings; and all incidentals.
- .3 Full compensation for the work of the Item shall include the cost of furnishing all materials, labour, tools, and equipment necessary to complete the work in accordance with the Contract, the Drawings and Specification, and shall cover all costs of surety, mobilization, assistance to the Departmental Representative and site office. Each Item shall include for all necessary supervision, labour, materials, plant and services, security provisions, weigh scales (if necessary) and all operations and allowances customary and necessary to complete each Item and the Contract as a whole notwithstanding the fact that not every such necessary operation is mentioned or included specifically for measurement.
- .4 All measurement shall be along a horizontal plane unless otherwise indicated.

PART 2 – ITEMS

<u>Item #</u>	<u>Item Description</u>	<u>Unit of Measure</u>	<u>Measurement for Payment Clause</u>
1	Mobilization And Demobilization	Lump Sum	Measurement for payment for mobilization / demobilization shall be lump sum. This Item consists of but is not necessarily limited to the transport of equipment and materials to and from the project site, establishment of site field office and all temporary facilities, security, signage; securing all necessary regulatory permits, insurance and bonding, establishment of a health and safety protocol including provision of a Health and Safety Plan, establish site survey control and costs associated with quantity surveys and quality control testing required for the duration of the project. Costs associated with dewatering and temporary brook diversions needed to complete the works will be captured under this item. No separate measurement for payment will be made for pumping of water, water diversions and any other measures required to resolve water issues to allow the work to proceed.
2	Environmental Protection	Lump Sum	Measurement for payment for environmental protection will be lump sum. The item will include all costs for providing and maintaining proper erosion and sedimentation controls for the project including but not limited to silt fencing, hay bales, dust control, etc. to meet the specification and applicable regulations. Also included is the preparation of an environmental protection plan and other tasks outlined in Section 01 35 43, Environmental Protection. Maintenance of erosion control features for the duration of the project is also included in this item. This will include maintenance of erosion control features until vegetation has been firmly established on embankment slopes and other disturbed areas.
3	Excavation and Backfill	m ³	<p>Excavation and Backfill (Common) will be measured for payment by the cubic metre (m³) to the satisfaction of the Departmental Representative and in accordance with the Contract Documents. Method of Measurement will be by the average end area method between cross-sections taken after the excavation and backfill is complete.</p> <p>Work includes but is not limited to excavation and re-use of material on site, including placement and compaction to the lines and elevations indicated. The excavation of weak/highly weathered bedrock material without the aid of D8/rock ripper (or equivalent) is considered common excavation and will be paid under this item.</p> <p>Excavation beyond the limits shown on the drawings will not be measured or paid for.</p>
4	Excavation and Disposal	m ³	<p>Excavation and disposal (common) will be measured for payment by the cubic metre (m³). Method of measurement will be by the average end area method taken between cross-sections after excavation and backfill is complete.</p> <p>Work includes, but is not limited to, excavation and disposal of excess material at the adjacent CBO property as directed by the Departmental Representative. The work will also include shaping the disposal pile to</p>

<u>Item #</u>	<u>Item Description</u>	<u>Unit of Measure</u>	<u>Measurement for Payment Clause</u>
			promote drainage (max 5:1 side slopes). The excavation of weak of highly weathered bedrock material without the aid of a D8 Rock Ripper or equivalent is considered common excavation and will be paid for under this item. Excavation beyond the limits shown on the drawing will not be measured or paid for.
5	Concrete Culvert – 2100mm Diameter	m	Installation of the concrete culvert will be measured for payment by the lineal metre (m) installed to the satisfaction of the departmental representative and in accordance with the contract documents. This item includes supply and placement of the concrete pipe, including the addition ion of fish baffles as shown on the drawings, to the lines and elevations shown on the drawings.
6	Gravels	Tonne	Gravels will be measured for payment by the tonne (t) successfully supplied and placed in the works in accordance with the contract documents and to the satisfaction of the Departmental Representative. Method of measurement will be by the scale ticket certified by the Departmental Representative as successfully placed into the works. This item includes supply, placement and compaction as indicated and all labour and materials as required to perform the work.
7	Rip-Rap	Tonne	Measurement for payment for Rip-Rap will be by the number of tonnes successfully placed to the lines and elevations indicated and to the satisfaction of the Departmental Representative. Method of measurement will be by the scale ticket certified by the Departmental Representative as successfully placed into the works. This item includes supply, placement and compaction as indicated and all labour and materials as required to perform the work.
8	Hydroseeding	m ²	Measurement for payment for hydroseeding will be for the number of square metres (m ²) supplied and placed as indicated on the drawings and to the satisfaction of the Departmental Representative. The unit price will include Measurement for payment will be based on a survey of the extents covered and will be based on plan dimensions only.

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Refer to Technical Specifications which reference "SUBMITTALS" under PART 1 - GENERAL of each section.

1.2 REQUIRED
SUBMITTALS

- .1 Submittals are required for, but not necessarily limited to the following items:
 - .1 Health and Safety Plan.
 - .2 Environmental Protection Plan.
 - .3 Samples of aggregate materials, if requested.
 - .4 Sieve analysis and test data.
 - .5 Shop drawings for concrete pipe.

1.3 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 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are co-ordinated.

1.3 ADMINISTRATIVE
(Cont'd)

- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .10 Keep one (1) reviewed copy of each submission on site.

1.4 SHOP DRAWINGS
AND PRODUCT DATA

- .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 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in Province of Nova Scotia, Canada.
- .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 Allow five (5) business days for Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings 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.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.

1.4 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd)

- .7 (Cont'd)
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .8 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.
- .9 After Departmental Representative's review, distribute copies.
- .10 Submit electronic copies of all relevant shop drawings to the Departmental Representative in pdf file format. Where it is not practical to provide electronic copies and where approved by the Departmental Representative, submit three (3) paper copies of shop drawings.
- .11 Submit pdf file of product data sheets or brochures for requirements requested in specification Sections where shop drawings will not be prepared due to standardized manufacture of product, unless otherwise directed by Departmental Representative.
- .12 Submit 6 copies of test reports for requirements requested in specification Sections unless otherwise directed by Departmental Representative.

1.4 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd)

- .12 (Cont'd)
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - .2 Testing must have been within three (3) years of date of contract award for project.
- .13 Submit pdf files of certificates for requirements requested in specification Sections unless otherwise directed 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.
- .14 Submit pdf files of manufacturers instructions for requirements requested in specification Sections unless otherwise directed by Departmental Representative.
 - .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.
- .15 Submit pdf files of Manufacturer's Field Reports for requirements requested in specification Sections unless otherwise directed by Departmental Representative.
 - .1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .16 Delete information not applicable to project.
- .17 Supplement standard information to provide details applicable to project.
- .18 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

1.4 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd)

- .19 The review of shop drawings is for sole purpose of ascertaining conformance with general concept.
- .1 This review shall not mean approval of 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.

PART 1 - GENERAL

1.1 SUBMITTALS

- .1 Submit to Departmental Representative copies of the following documents, including updates issued:
 - .1 Site Specific Health and Safety Plan.
 - .2 Compliance certificates and other permits obtained
 - .3 Reports or directions issued by Federal, Provincial inspectors or other Authority having jurisdiction.
 - .4 Formal Safety Inspection Reports
 - .5 Accident or Incident Reports
 - .6 MSDS data sheets.
 - .7 Name of person(s) designated to perform full time health and safety site supervision.
- .2 Submit other data, information and documentation upon request as stipulated elsewhere in this section.

1.2 COMPLIANCE REQUIREMENTS

- .1 Comply with the Occupational Health and Safety Act for the Province of Nova Scotia, and the Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code Part II, and the Canada Occupational Safety and Health Regulations made under Part II of the Canada Labour Code.
- .3 Observe and enforce construction safety measures required by:
 - .1 2010 National Building Code of Canada, Part 8;
 - .2 Provincial Worker's Compensation Board;
 - .3 Municipal statutes and ordinances.
- .4 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.
- .5 A copy of the Canada Labour Code Part II may be obtained by contacting:

Publishing and Depository Services,
Public Works and Government Services Canada
Ottawa, Ontario, K1A 0S9

Tel: (613) 941-5995 (1-800-635-7943)
Publication No. L31-85/2000 E or F

1.2 COMPLIANCE
REQUIREMENTS
(Cont'd)

- .6 Maintain Workers Compensation Coverage for duration of Contract. Submit Letter of Good Standing to Departmental Representative upon request.

1.3 RESPONSIBILITY

- .1 Be responsible for safety of persons and property on work site and for protection of general public circulating adjacent to work operations to extent that they may be affected by conduct of Work.
- .2 Enforce compliance by workers and other persons granted access to Work site with safety requirements of Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.4 SITE CONTROL
AND ACCESS

- .1 Control Work site and entry points. Grant and allow entry to only workers and other persons so authorized. Immediately stop non-authorized persons from circulating within construction areas and remove from site.
- .2 Implement procedures for granting permission to enter onto work site to all persons who require access. Procedures to include the provision of a site safety orientation session.
- .3 Delineate and isolate construction areas from other areas of site by use of appropriate means. Erect barricades, fences, hoarding and temporary lighting as required. See Section 01 56 00 for minimum type of barriers acceptable.
- .4 Erect signage at entry points and at other strategic locations around site, clearly identifying construction area(s) as being "off-limits" to non-authorized persons. Signage must be professionally made in both official languages or by use of well understood graphic symbols.
- .5 Secure site at night time or provide security guard as deemed necessary to protect site against entry.
- .6 Ensure persons granted access are fitted and wear appropriate personnel protective equipment (PPE). Be responsible for the provision of such PPE to persons who require access to conduct work or perform inspections.

1.5 PROTECTION

- .1 Provide safety barricades, lights and signage on work site as required to provide a safe working environment for workers.
- .2 Carry out Work placing emphasis on health and safety of public, site personnel and protection of the environment.
- .3 Contractor to provide warning sign stating that no pedestrians will be allowed to cross the work area.
- .4 Should unforeseen or peculiar safety related hazard or condition become evident during performance of work, immediately take measures to rectify the situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

1.6 FILING OF NOTICE

- .1 File Notice of Project and other Notices with Provincial authorities prior to commencement of Work.
- .2 Upon request, Departmental Representative will provide name and mailing address of provincial department to whom the Notice of Project must be sent.

1.7 PERMITS

- .1 Obtain permits, licenses and compliance certificates, at appropriate times and frequency as stipulated by authorities having jurisdiction.
- .2 Where particular permit or compliance certificate cannot be obtained at the required stage of work, notify Departmental Representative in writing and obtain Departmental Representative's approval to proceed prior to carrying out that portion of work.
- .3 Post all permits on site. Submit copies to Departmental Representative.

1.8 HAZARD ASSESSMENTS

- .1 Implement and carry out a health and safety hazard assessment program as part of the Work. Program to include:
 - .1 Initial hazard assessment carried out immediately upon notification of contract award and prior to commencement of Work.

1.8 HAZARD
ASSESSMENTS
(Cont'd)

- .1 (Cont'd)
- .2 On-going hazard assessments performed during the progress of work identifying new or potential health risks and safety hazards not previously known. As a minimum hazard assessments must be carried out when:
 - .1 New sub-trade work, new subcontractor(s) or new workers arrive at the site to commence another portion of the work.
 - .2 The scope of work has been changed by Change Order.
 - .3 Potential hazard or weakness in current health and safety practices are identified by Departmental Representative or by an authorized safety representative.
- .3 Hazard assessments to be project and site-specific, based on review of contract documents, site and weather conditions.
- .4 Each hazard assessment to be made in writing. Keep copies of all assessments on site for duration of work. Upon request, make available to Departmental Representative for inspection.

1.9 PROJECT/ SITE
CONDITIONS

- .1 The following are known or potential project related safety hazards at site:
 - .1 Work immediately adjacent/atop embankments with heavy equipment and construction personnel.
 - .2 Recreational Traffic (ATVs).
 - .3 Working near water.
- .2 Obtain from Departmental Representative, copy of MSDS Data sheets of existing hazardous materials stored on site or being used by Facility and Tenant personnel in the course of their operations.
- .3 Above lists will not be construed as being complete and inclusive of safety and health hazards encountered as a result of Contractor's operations during the course of Work. Include above items into the hazard assessment program specified herein.

1.10 SAFETY
MEETINGS

- .1 Prior to commencement of Work, attend health and safety meeting conducted by Departmental Representative. Have Contractor's Site Superintendent in attendance. Departmental Representative will advise of time and location.

- .1 Develop written site-specific Project Health and Safety Plan, based on hazard assessments, prior to commencement of Work. Submit plan to Departmental Representative within seven (7) calendar days of Contract Award date.
- .2 Health and Safety Plan shall contain the following three (3) parts:
 - .1 Part 1: List of individual health risks and safety hazards identified by hazard assessments.
 - .2 Part 2: List of specific measures to control or mitigate each hazard and risk identified in part one of Plan. Describe the engineering controls, personnel protective equipment and safe work practices to be implemented and followed when performing work related to each identified hazard or risk.
 - .3 Part 3: Emergency Measures and Communications Procedures as follows:

1.11 HEALTH AND
SAFETY PLAN
(Cont'd)

.2 (Cont'd)

.3 (Cont'd)

.1 Emergency Measures: on- site operating procedures, evacuation measures and emergency response to be implemented in the occurrence of an incident. Procedures to be specific and relevant to identified hazards. Measures to complement and be integrated with the facility and tenants Emergency Response Plans in place at site. Obtain information on existing emergency and evacuation plans from Departmental Representative and incorporate appropriate data.

.2 Communication Procedures:

.1 List of names and telephone numbers of designated officials, to be contacted should an incident or emergency situation occur, including the following:

.1 General Contractor and all Subcontractors.

.2 Federal and Provincial Departments and local emergency resources organizations, as resources organizations, as applicable laws and regulations.

.3 Officials from PWGSC
Departmental Representative will provide list of names to be included.

.2 Procedures implemented at site to communicate and share information between workers, subcontractors, and General Contractor on work activities and in particular those which might endanger workers and Facility employees.

.3 Prepare Health and Safety Plan in a three column format, addressing the three parts specified above, as follows:

Column 1	Column 2	Column 3
Identified	Control	Emergency Measures
Hazard	Measures	& Communications
	Implemented	Procedures

.4 Develop Health and Safety Plan in collaboration with all subcontractors. Address all work and activities of subcontractors as they arrive on site. Immediately update Plan and submit to Departmental Representative.

.5 Implement, maintain and enforce compliance with requirements of the Health and Safety Plan until final completion of work and demobilization from site.

1.11 HEALTH AND
SAFETY PLAN
(Cont'd)

- .2 (Cont'd)
- .3 (Cont'd)
 - .6 As Work progresses, review and update Plan addressing additional health risks and safety hazards identified by on-going hazard assessments.
 - .7 Submit revised versions of Plan to Departmental Representative.
 - .8 Post a typed written copy, including all updates, of the Health and Safety Plan in a common visible location at Work site.
 - .9 Submission of the Health and Safety Plan, and updates, to the Departmental Representative is for review and information purposes only. Its submission shall not be construed to imply approval by Departmental Representative, be interpreted as a warranty of being complete, accurate and legislative compliant and shall not relieve Contractor of his legal obligations for the provision Health and Safety on the construction project.

1.12 SAFETY
SUPERVISION
AND INSPECTIONS

- .1 Designate qualified person or persons to be present on site at all times during Work and be responsible for supervising health and safety and conducting safety inspections of work site.
- .2 Assign responsibility, obligation and authority to such designated person(s) to stop and start work as deemed necessary for reasons of health and safety.
- .3 Provide names of designated individuals to Departmental Representative.
- .4 Cooperate with Health and Safety Site Coordinator responsible for the entire site or facility, should one be designated by Departmental Representative.
- .5 Conduct regularly scheduled safety inspections of work site as follows:
 - .1 Informal Inspections: carry out on a minimum bi-weekly basis. Note deficiencies and remedial action taken in a log book or diary.
 - .2 Formal Inspections: carry out on a minimum monthly basis. Use standardized safety checklist forms. Prepare written report for each formal inspection. Document deficiencies, remedial action needed and assign responsibility for rectification to appropriate subcontractor or worker.

1.12 SAFETY
SUPERVISION
AND INSPECTIONS
(Cont'd)

- .6 Distribute monthly reports to subcontractors for their pursuance. Follow- up and ensure appropriate action and corrective measures are taken.
- .7 Maintain safety inspection documentation on site. Submit copies of formal inspection reports to Departmental Representative.
- .8 All persons in Contractor's employ responsible for health and safety requirements specified in the Contract Documents to be qualified in Occupational Health and Construction Safety as defined in the Provincial Occupational Health And Safety Act.

1.13 TRAINING

- .1 Confirm that workers, subcontractors and other authorized persons granted access to site are trained and have been fully instructed, by a qualified instructor, on:
 - .1 Safe operation of tools and equipment.
 - .2 Proper wearing and use of personnel protective equipment (PPE) as applicable to the purpose and activities to be conducted on site.
 - .3 Safe work practices and procedures to be followed during the performance of their given Work tasks or function on site.
 - .4 Site Conditions and minimum site safety rules provided through site orientation sessions.
- .2 Make training records readily available for review by Departmental Representative upon request.

1.14 MINIMUM SITE
SITE SAFETY RULES

- .1 Notwithstanding the requirement to abide by federal and provincial health and safety regulations, the following safety rules shall be considered minimum requirements at the work site and obeyed by all persons granted access:
 - .1 Wear personnel protective equipment (PPE) appropriate to function and task on site; the minimum requirements being hard hat, safety footwear (and eye protection where appropriate).
 - .2 Immediately report unsafe activities, conditions, near-miss accidents, injuries and damages.
 - .3 Maintain site in tidy condition.
 - .4 Obey warning signs and safety tags.
- .2 Brief workers on site safety rules, and on the disciplinary measures to be taken for violation or non compliance of such rules. Post such information on site.

1.15 ACCIDENT
REPORTING

- .1 Investigate and report incidents and accidents as outlined in Provincial Occupational Safety and Health Act and Regulations.
- .2 Investigate and immediately report to Departmental Representative incidents and accidents which results, or has the potential of resulting in:
 - .1 Injuries requiring medical aid,
 - .2 Property damage in excess of \$5,000.00,
 - .3 Required notification to Workers Compensation Board or other regulatory agencies as stipulated by applicable regulations.
- .3 Medical aid in above clause shall have the same meaning as the term "medical aid injury" as defined in the Canadian Dictionary of Safety Terms, latest issue, from the Canadian Society of Safety Engineers (C.S.S.E) as follows:
 - .1 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.

1.16 TOOLS AND
EQUIPMENT SAFETY

- .1 Implement and follow a scheduled tool and equipment inspection/maintenance program at work site. Regularly check tools, equipment and machinery for safe operation and perform maintenance at pre-established time and frequency intervals as recommended by manufacturer. Include subcontractors equipment as part of the inspection process.
- .2 Use standardized checklists to ensure established safety checks are stringently followed.
- .3 Immediately tag and remove items found faulty or defective off site.
- .4 Maintain written documentation on each inspection. Make available to Departmental Representative upon request.

1.17 HAZARDOUS
PRODUCTS

- .1 Comply with requirements of Workplace Hazardous Materials Information Systems (WHMIS).
- .2 Keep MSDS data sheets on site. Provide copies of all data sheets to Departmental Representative upon receipt of materials on site.
- .3 Post all MSDS data sheets on site, in a common area, visible to workers.

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| <u>1.18 BLASTING</u> | .1 | Blasting or other use of explosives is not permitted. |
| <u>1.19 POWDER
ACTUATED DEVICES</u> | .1 | Use powder actuated fastening devices only after receipt of written permission from Departmental Representative. |
| <u>1.20 POSTING OF
DOCUMENTS</u> | .1 | Post documents indicated herein and as required by Authority having jurisdiction. |
| <u>1.21 RECORDS ON
SITE</u> | .1 | Maintain on site copy of safety documentation as specified in this section and other safety related reports and documents issued to or received from authorities having jurisdiction. |
| | .2 | Make available to Departmental Representative, or authorized safety representative, for inspection upon request. |

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Section 01 41 00 - Regulatory Requirements
- .2 Section 31 11 00 - Clearing and Grubbing
- .3 Section 31 25 00 - Erosion and Sediment Control
- .4 Section 31 37 00 - Rip Rap
- .5 Section 32 92 19 - Hydraulic Seeding

1.2 REFERENCES

- .1 Canadian Council of Ministers of the Environment (CCME), Environmental Quality Guidelines.
- .2 Canadian Environmental Protection Act.
- .3 Nova Scotia Environment, Watercourse Alterations Standard (2015).
- .4 Nova Scotia Environment, Erosion and Sedimentation Control Handbook for Construction Sites.
- .5 Environment Canada, Section 36(3) of the Fisheries Act, prohibiting the planned or accidental discharge of deleterious substances to waters frequented by fish.
- .6 Environment Canada, Migratory Birds Convention Act, prohibiting the deposit of oil, oil wastes, or other substances harmful to migratory birds or in any area frequented by birds and the harm of any migratory bird or its nest.
- .7 Species at Risk Act.
- .8 Nova Scotia Environment Act.

1.3 DEFINITIONS

- .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.

1.3 DEFINITIONS
(Cont'd)

- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.4 ENVIRONMENTAL PERFORMANCE

- .1 Comply with all mitigative measures, terms and conditions outlined in the Nova Scotia Watercourse Alterations Standard.
- .2 A pre-award meeting will be held with the successful bidder prior to start-up. All Contractor staff and Departmental Representative's staff assigned to project are required to attend. Environmental protection requirements for the project will be reviewed, including, but not limited to, appropriate specifications, related permit requirements and on-site reporting and monitoring procedures.

1.5 SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00.
- .2 Prior to commencing construction activities or delivery of materials to site, submit Environmental Protection Plan for review and approval by Departmental Representative. Environmental Protection Plan is to present comprehensive overview of known or potential environmental issues which must be addressed during construction.
- .3 Address topics at level of detail commensurate with environmental issue and required construction tasks.
- .4 Environmental Protection Plan: include as applicable:
 - .1 Names of persons responsible for ensuring adherence to Environmental Protection Plan.
 - .2 Names and qualifications of persons responsible for manifesting hazardous waste to be removed from site.
 - .3 Names and qualifications of persons responsible for training site personnel.
 - .4 Descriptions of Environmental Protection Personnel Training Program.

1.5 SUBMITTALS
(Cont'd)

- .4 (Cont'd)
- .5 Erosion and Sediment Control Plan which identifies type and location of erosion and sediment controls to be provided including monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations. Refer to Section 31 25 00.
- .6 Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on site.
- .7 Traffic Control Plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plans include measures to minimize amount of mud transported onto paved public roads by vehicles or runoff.
- .8 Work Area Plan showing proposed activity in each portion of area and identifying areas of limited use or non-use. Plan to include measures for marking limits of use areas including methods for protection of features to be preserved within authorized work areas.
- .9 Spill Contingency Plan including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
- .10 Non-Hazardous Solid Waste Disposal Plan identifying methods and locations for solid waste disposal including clearing debris and recycling of decommissioned bridge materials.
- .11 Air Pollution Control Plan detailing provisions to assure that dust, debris, materials, and trash, do not become air borne and travel off project site.
- .12 Contaminant Prevention Plan that: identifies potentially hazardous substances to be used on job site; identifies intended actions to prevent introduction of such materials into air, water, or ground; and details provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
- .13 Waste Water Management Plan that identifies methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines.

1.5 SUBMITTALS
(Cont'd)

- .4 (Cont'd)
.14 Historical, Archaeological, Cultural and Biological Resources Plan that defines procedures for identifying and protecting historical, archaeological, cultural and biological resources.

1.6 SITE SET-UP AND USE

- .1 All site activities related to construction are to be confined within the defined project boundaries.
- .2 Work sites will be equipped with appropriate and properly maintained sanitary facilities.
- .3 Garbage must be collected and removed daily from the worksite to keep the site sanitary. All material must be removed, transported and disposed of in accordance with existing provincial and municipal solid waste disposal guidelines, project waste management plan and/or regulations.
- .4 Temporary storage parking areas, and turn-a-round facilities for contractor-related equipment and vehicles will be limited to those areas agreed to and designated by the Departmental Representative.
- .5 Noise control measures, such as properly functioning mufflers on equipment, must be in place.
- .6 Littering is prohibited.

1.7 FIRES

- .1 Fires and burning of rubbish on site is not permitted.
- .2 Equipment must be in proper working condition and be used in such a manner as to minimize the potential for ignition of vegetation.
- .3 Vehicles and stationary equipment must be equipped with fire suppression equipment such as an operable fire extinguisher.
- .4 The Departmental Representative must be contacted immediately in the event of a fire. Make all reasonable efforts to extinguish any fires on the site.

1.8 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site. Remove all garbage from site daily.

1.8 DISPOSAL OF
WASTES
(Cont'd)

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

1.9 DRAINAGE

- .1 As part of the Environmental Protection Plan, provide erosion and Sediment Control Plan that identifies type and location of erosion and sediment controls to be provided. Plan: include monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
- .2 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .3 Do not pump water containing suspended materials into waterways or drainage systems.
- .4 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with Provincial authority requirements.

1.10 SITE CLEARING
AND PLANT
PROTECTION

- .1 Restrict tree removal to areas indicated or designated by Departmental Representative.
- .2 Do not clear vegetation unless approved by Departmental Representative.
- .3 Sensitive areas should be cleared in a manner which will minimize disturbance to surface vegetation and soils. Areas such as stream crossings should only be cleared immediately prior to construction using light equipment.
- .4 Avoid disturbance to low cover vegetation.
- .5 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .6 Bulldozers, graders, and other clearing and grubbing equipment should not be operated outside of designated clearing boundaries and should have a restricted turning radius.
- .7 Do not remove vegetation and topsoil to obtain fill for road construction purposes.

- .1 Any required instream Work must be completed during the June 1 to September 30, 2017 period.
- .2 Carry out work adjacent the watercourse with caution to avoid contamination or siltation in the watercourse. Precautionary measures are to include, but not be limited to: use of rock fill for diversion ditches, adjacent to the waterway, maintenance of existing culvert flow and/or construction of dams and pumping waters while new culvert is installed as per the drawings.
- .3 Do not operate construction equipment in waterways.
- .4 No fresh concrete, lime, cement, or other construction materials or debris is to enter the watercourse.

1.11 WORK ADJACENT
TO WATERWAYS
(Cont'd)

- .5 Clean heavy equipment to be used on the project site of mud, soil or debris prior to being brought to the site, in good working order, without leaks of fuel, oil, grease or lubricants.
- .6 The movements of fish through the project site will be unimpeded at all times.
- .7 Have a copy of all applicable permits at the project site at all times.
- .8 Do not use waterway beds for borrow material.
- .9 No excavated fill, waste material or debris from the removal of the existing structure is to enter the watercourse.
- .10 Design and construct temporary crossings to minimize erosion to waterways.
- .11 Do not skid logs or construction materials across waterways.
- .12 Do not clean or drain equipment in waterways.
- .13 Blasting is prohibited.
- .14 Temporary diversion ditches, approved by the Departmental Representative are to be plastic lined.
- .15 Temporary storage sites for debris and soil generated from clearing operations should be deposited away from watercourses, should be surrounded by a natural vegetative buffer, should be screened from the road and should be selected by the Departmental Representative.
- .16 Remove temporary structures, and debris from the waterway.
- .17 Dredged material is not to re-enter the waterway.

1.12 POLLUTION
CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract. Refer to Section 31 25 00.
- .2 Control emissions from equipment and plant to 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.

1.13 EARTH MOVEMENT

- .1 Clearing and grubbing of project site is to be kept to a minimum.
- .2 Where engineering requirements can be met, excavated materials from this project must be used for backfilling.
- .3 All surplus excavated material must be removed from the site as soon as possible and disposed of at an approved location and in an approved manner.
- .4 Any proposed sources of borrow material will be approved by the Departmental Representative prior to start-up. Fill materials or aggregate used during this Contract shall not contain sulphide bearing material as defined by the proposed Guidelines for Development on Slates in Nova Scotia.
- .5 When vegetation must be removed, keep the extent and duration of exposure to a minimum. Plan the phases of development so that only areas which are actively being developed are exposed.
- .6 Stockpile topsoil from excavated sections for subsequent application to side slopes requiring revegetation. Avoid steep slopes on stockpiles in order to prevent erosion.
- .7 Leave areas of unstable clays undisturbed.
- .8 Do not remove aggregates from streams.
- .9 Install sediment traps, basins, or ponds, whether temporary or permanent, before construction begins on the rest of the site.
- .10 The use of chemical dust control agents must be pre-approved by the Departmental Representative.
- .11 Where there is potential for severe erosion and/or downstream siltation, cover excavations during major precipitation events as directed by Departmental Representative.

1.14 EROSION AND
SEDIMENTATION
CONTROL

- .1 Appropriate preventative controls should be in place at all times during construction to prevent undue erosion and sedimentation. As part of the Environmental Protection Plan, provide to the Departmental Representative seven (7) days before start-up an Erosion and Sedimentation Control Plan. Such a plan shall incorporate necessary silt fences, silt traps, plastic lined trenches and ditches, temporary culverts or diversions as approved by the Departmental Representative. Methodology proposed should be in accordance with the Nova Scotia Manual for Erosion and Sedimentation Control, Handbook for Construction Sites.
- .2 Mechanically compact backfilled slopes and make grades consistent with the prevailing down-slope grade. Immediately stabilize exposed soils against erosion by covering with seed and hay mulch, clean rock, gravel or other suitable materials. Hydroseeding operations with approved seed mix will be carried out, as directed by Departmental Representative. All environmental controls must be monitored on a daily basis and following precipitation events. Any required maintenance or remediation must be done immediately.

1.15 HAZARDOUS
MATERIALS

- .1 As part of the Environmental Protection Plan, submit Hazardous Materials Management and Spill Contingency Plan.
- .2 The management of fuels, lubricants and chemicals must meet with the requirements of the Nova Scotia Dangerous Goods and Hazardous Wastes Management Criteria and all other appropriate provincial and federal regulations to include but not be limited to the following:
 - .1 Temporary fuel storage sites are to be located a minimum 200 m from any watercourse.
 - .2 Fuel storage containers must be accompanied by impermeable structures that would provide containment of 125% of the container capacity in the event of a leak or spill.
 - .3 Fueling and lubricating of equipment cannot be done closer than 100 m to any watercourse.
 - .4 All refuelling and lubricating operations should employ protection measures such as drip pans, to reduce the potential for escape or petroleum products to the environment.

1.15 HAZARDOUS
MATERIALS
(Cont'd)

- .3 No material toxic to fish or any aquatic life shall be permitted to enter any stream, river, or lake. This includes, but not be limited to: lubricants, fuels, testing fluids, insecticides, detergents, herbicides, cement, lime or concrete.
- .4 The Departmental Representative must be immediately contacted after a spill of more than 10 L of fuel or lubricant, and after any amount of other chemical products has escaped. All stained soil resulting from the use of chemicals and fuels is to be cleaned up and disposed of at an approved disposal site.

1.16 SITE
DECOMMISSIONING

- .1 Unless prior permission from the Departmental Representative is obtained, all equipment, facilities and materials must be removed from the site at the finish of each completion of the work.
- .2 All work sites must be returned to a neat and tidy condition upon site abandonment.

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Section 01 11 00 - General Instructions
- .2 Section 01 35 30 - Health and Safety
- .3 Section 01 35 43 - Environmental Procedures
- .4 Section 31 25 00 - Erosion and Sediment Control

1.2 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 CAN/CSA-S6-06, Canadian Highway Bridge Design Code.
- .3 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.
 - .3 Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads, latest edition.
 - .4 Nova Scotia Department of Transportation and Infrastructure Renewal, Standard Specification, Highway Construction and Maintenance.

1.3 HAZARDOUS
MATERIAL DISCOVERY

- .1 Stop work immediately when material suspected as being hazardous is encountered during demolition work. Notify Departmental Representative immediately.

PART 1 - GENERAL

1.1 INSPECTION

- .1 Allow Departmental Representative adequate time and access to Work. If part of Work is in preparation at locations other than Place of Work, allow time and 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.
- .5 The Departmental Representative will participate in the taking of survey of all quantities with the Contractor to complete the surveys in the presence of the Departmental Representative.

1.2 INDEPENDENT
INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies will be engaged and coordinated by Departmental Representative for purpose of inspecting and/or testing portions of Work. These agencies include, but are not limited to, concrete testing (precast and cast-in-place), aggregate tests, compaction tests, asphalt tests.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility of Contractor to perform Work in accordance with Contract Documents.

1.2 INDEPENDENT
INSPECTION AGENCIES
(Cont'd)

- .4 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 additional cost to the Contract. Contractor will pay costs for retesting and reinspection.

1.3 ACCESS TO WORK

- .1 Allow inspection/testing agencies access and required time 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 REPORTS

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

1.6 TESTS AND MIX
DESIGNS

- .1 Furnish test results and mix designs as requested.

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Section 01 33 00 - Submittal Procedures
- .2 Section 01 35 30 - Health and Safety
- .3 Section 01 35 43 - Environmental Protection
- .4 Section 01 56 00 - Temporary Barriers and Enclosures

1.2 REFERENCES

- .1 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.
 - .2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
- .2 Canadian Standards Association (CSA International)
 - .1 CSA-A23.1/A23.2-09, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - .2 CSA-0121-08, Douglas Fir Plywood.
 - .3 CAN/CSA-S269.2-M1987(R2003), Access Scaffolding for Construction Purposes.
 - .4 CAN/CSA-Z321-96(R2001), Signs and Symbols for the Occupational Environment.

1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00.

1.4 SCAFFOLDING

- .1 Scaffolding in accordance with CAN/CSA-S269.2.
- .2 Provide and maintain scaffolding, ramps, ladders, swing staging, platforms, temporary stairs as required.

1.5 HOISTING

- .1 Provide, operate and maintain hoists required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists.
- .2 Hoists to be operated by qualified operator.

1.6 SITE
STORAGE/LOADING

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

1.7 CONSTRUCTION
PARKING

- .1 Parking will be permitted in the area of the site provided it does not disrupt performance of Work and after obtaining agreement with the Departmental Representative.
- .2 Provide and maintain adequate access to project site.
- .3 Keep parking areas clean and maintained during period of Contract.

1.8 EQUIPMENT,
TOOL AND MATERIALS
STORAGE

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

1.9 SANITARY
FACILITIES

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

1.10 CONSTRUCTION
SIGNAGE

- .1 Provide signs and notices for safety and instruction complete with Graphic symbols to CAN/CSA-Z321.
- .2 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if

1.11 CLEAN-UP

- .1 Remove construction debris, waste materials, packaging material from work site daily.

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| <u>1.11 CLEAN-UP</u>
(Cont'd) | <p>.2 Clean dirt or mud tracked onto paved or surfaced roadways.</p> <p>.3 Store materials resulting from demolition activities that are salvageable.</p> <p>.4 Stack stored new or salvaged material not in construction facilities.</p> |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

PART 3 - EXECUTION

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|--------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <u>3.1 GENERAL</u> | <p>.1 Construct and maintain construction facilities in accordance with applicable Sections contained in these specification.</p> |
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PART 1 - GENERAL

1.1 INSPECTION AND
DECLARATION

- .1 Contractor's Inspection: conduct inspection of Work, identify deficiencies and defects, and repairs as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Departmental Representative's Inspection.
- .2 Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
 - .4 Certificates required by jurisdictional authorities have been submitted.
 - .5 Operation of systems have been demonstrated to Departmental Representative's personnel.
 - .6 Work is complete and ready for final inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request reinspection.

1.2 CLEANING

- .1 Remove waste and surplus materials, rubbish and construction facilities from the site in accordance with applicable sections of these specifications.

1 INSPECTION AND
DECLARATION

- .1 Contractor's Inspection: Conduct an 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 that corrections have been made.
 - .2 Request Departmental Representative's Inspection.
- .2 Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.

2 MATERIALS AND
FINISHES

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. 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.
- .4 Additional Requirements: as specified in individual specifications sections.

3 WARRANTIES AND
BONDS

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.

3 WARRANTIES AND
BONDS
(Cont'd)

- .4 Except for items put into use with Departmental Representative's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
- .5 Verify that documents are in proper form, contain full information, and are notarized.
- .6 Co-execute submittals when required.
- .7 Retain warranties and bonds until time specified for submittal.

4 RECORD DRAWINGS

- .1 After award of Contract, Departmental Representative will provide a set of transparency drawings for purpose of maintaining record drawings. Accurately and neatly record deviations from Contract Documents caused by site conditions and changes ordered by Departmental Representative.
- .2 Identify drawings as "Project Record Copy". Maintain in new condition and make available for inspection on Site by Departmental Representative.
- .3 On completion of Work and prior to final inspection, submit record documents to Departmental Representative.