

PART 1 - GENERAL

1.1 DESCRIPTION
OF WORK AND
LIST OF DRAWINGS

- .1 The project is located in the Cape Breton Highlands National Park near the community of South Harbour, Nova Scotia. The work generally involves replacing an existing 3.65m wide x 1.8m high CSP arch culvert under the Cabot Trail, approximately 6km south of the White Point Road turn-off. The activities involved in this replacement include erosion and sediment control measures, constructing a one (1) lane detour road with associated culvert extension, flow diversion and excavation and backfill, traffic control, dewatering as required, constructing foundations, removing the existing culvert, placing a 4.3m wide precast rigid frame culvert with wing walls across the brook, backfilling and reinstating the roadway, removing the temporary detour lane with associated culvert extension and reinstating the site to its original condition.

- .2 Drawing Numbers and Drawing Titles:
 - .1 C1 - Plan and Sections - Existing Conditions.
 - .2 C2 - Temporary Detour Plan, Profiles and Sections.
 - .3 C3 - Proposed Conditions Plan, Profiles and Sections.
 - .4 C4 - Miscellaneous Sections and Details

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 Perform Work in accordance with National Parks Act, Code of Practice of the Department of Labour, as it pertains to the Temporary Workplace Traffic Control Manual (Department of Transportation & Infrastructure Renewal and any other code of federal, provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply).
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1.3 CODES
 (Cont'd)

- .2 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.
- .3 Conform to latest revision 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.
- .4 Vehicle weights and dimensions shall conform to Public Highway Act (Nova Scotia).

1.4 WORK WITHIN
 PARK BOUNDARIES

- .1 The project is within a National Park, and it is essential that all lands remain as undisturbed as possible. The Contractor will be expected to use standards and methods beyond those for normal construction in order to protect the environment and ensure the aesthetics of the work. Contract limits shall be strictly adhered to and every precaution shall be taken to minimize environmental damage and disruption to vegetation, wildlife habitat, and structures or existing services, both on construction and storage sites.
 - .1 If any damage occurs during construction, bear the expense to immediately restore such damaged areas to the satisfaction of the Departmental Representative.
 - .2 If Contractor fails to repair damage to the satisfaction of the Departmental Representative, the Departmental Representative may complete repairs at the Contractor's expense.
 - .3 Confirm that contracted Work meets the standards outlined in the contract specification and drawings.
 - .4 Confirm that no damage will be done to aerial or underground electrical/ communications cables.
 - .5 All sources of aggregate and asphalt cement must be submitted to the Departmental Representative for approval at least two (2) weeks prior to the start of any work.
 - .6 The Contractor is responsible to follow the Provincial requirements regarding the following:
 - .1 Pit and Quarry Guidelines
 - .2 Environmental Construction Practice specifications
 - .7 Make arrangements with authorities or owners of private properties for quarrying and transporting materials and machinery over their properties and be responsible for obtaining and paying of fees.

1.5 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.

1.6 SITE CONDITIONS

- .1 Visit the roadway and review existing site conditions.
- .2 The project is being carried out under a class screening report for highway relatd projects prepared by Parks Canada to streamline the Envrionmental Impact Analysis (EIA) process. The mitigation measures required to be carried out by the contractor under this screening report are attached as Appendix B.
- .3 A Geotechnical investigation has been carried out for this site. Geotechnical Report No.034-145, dated March 12, 2015 by Conquest Engineering Ltd. is included in Appendix A. Any interpretations of its finding will be made at the Contractor's own risk and the Department Representative will not be held responsible for the interpretation of this document.

1.7 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.

1.8 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.
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- 1.9 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 Contractor, Departmental Representative and Parks Canada 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.
 - .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.
- 1.10 PARTIAL OCCUPANCY OF USE
- .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.
- 1.11 CONTRACTOR'S USE OF SITE
- .1 The Departmental Representative will specify the areas for work and storage.
 - .2 No storage area is available outside the limits of construction.
- 1.12 PROJECT MEETINGS
- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.
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1.13 SETTING OUT
OF WORK

- .1 A georeferenced CAD file of the site will be provided to the Contractor for use in layout.
- .2 Carry out all layout.
- .3 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .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.

1.14 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.

1.15 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 along the existing Cabot Trail.
 - .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 Do Work such that at least one lane of traffic is maintained at construction site at all times.
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| <u>1.15 EXISTING SERVICES
(Cont'd)</u> | .8 | Do Work such traffic is not unduly impeded, interrupted or endangered by execution or existence of work or plant, with the exception of allowable closures as outlined in Section 01 35 00. |
| | .9 | 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. |
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| <u>1.16 ADDITIONAL DRAWINGS</u> | .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. |
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| <u>1.17 RELICS, ANTIQUES AND WILDLIFE HABITAT</u> | .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. |
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| <u>1.18 NATIONAL PARKS ACT</u> | .1 | For projects within boundaries of National Park, perform work in accordance with National Parks Act. |
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| <u>1.19 PERMITS/ AUTHORITIES</u> | .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. |
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PART 2 - PRODUCTS Not applicable.

PART 3 - EXECUTION Not applicable.

PART 1 - GENERAL

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| <u>1.1 RELATED
SECTIONS</u> | .1 | Refer to Technical Specifications which reference "SUBMITTALS" under PART 1 - GENERAL of each section. |
| <u>1.2 REQUIRED
SUBMITTALS</u> | .1 | Submittals are required for, but not necessarily limited to the following items: <ul style="list-style-type: none">.1 Health and Safety Plan..2 Environmental Protection Plan..3 Concrete Mix Design..4 Samples of aggregate materials, if requested..5 Product data for asphalt paving..6 Shop drawings for segmental concrete retaining wall..7 Shop drawings for precast rigid frame culvert. |
| <u>1.3 ADMINISTRATIVE</u> | .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. |
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- 1.3 ADMINISTRATIVE (Cont'd)
- .7 Verify field measurements and affected adjacent Work are co-ordinated.
 - .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.
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1.4 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd)

- .7 Accompany submissions with transmittal letter, 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.
 - .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 Report signed by authorized official of testing laboratory that material, product or system identical
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1.4 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd)

- .12 (Cont'd)
 - .1 (Cont'd)
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.
 - .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
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1.4 SHOP DRAWINGS .19 (Cont'd)
AND PRODUCT DATA .1 (Cont'd)
(Cont'd) 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 2 - PRODUCTS Not applicable.

PART 3 - EXECUTION Not applicable.

PART 1 - GENERAL

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| <u>1.1 REFERENCE
STANDARD</u> | <ul style="list-style-type: none">.1 Regulate traffic in accordance with the Public Highways Act (Nova Scotia) as stipulated in the Temporary Workplace Traffic Control Manual (NSTWTTCM) distributed by the Nova Scotia Department of Transportation and Infrastructure Renewal..2 The Departmental Representative reserves the right to direct the Contractor to reduce either the number or length of traffic control work areas during peak traffic volumes or when cumulative delays exceed the specified maximum. |
| <u>1.2 RELATED
SECTIONS</u> | <ul style="list-style-type: none">.1 Section 01 41 00 - Regulatory Requirements.2 Section 01 56 00 - Temporary Barriers and Enclosures |
| <u>1.3 REFERENCES</u> | <ul style="list-style-type: none">.1 Manual of Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition..2 Nova Scotia Temporary Workplace Traffic Control Manual - Latest Edition. |
| <u>1.4 PROTECTION OF
PUBLIC TRAFFIC</u> | <ul style="list-style-type: none">.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:<ul style="list-style-type: none">.1 Place equipment in position to present minimum of 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 Do not close any lanes of road without approval of Departmental Representative. Before re-routing traffic erect suitable signs and devices in accordance with instructions contained in Part D of MUTCD and Nova Scotia Temporary Workplace Traffic Control Manual. Provide sufficient crushed gravel to ensure a smooth riding surface during work. |
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1.4 PROTECTION OF
PUBLIC TRAFFIC
(Cont'd)

- .4 Keep travelled way graded, free of pot holes and of sufficient width for required number of lanes of traffic.
 - .1 Provide detours as indicated and phasing of traffic throughout construction shall be carried out as indicated on the drawings, unless otherwise approved by the Departmental Representative.
- .5 As indicated, provide gravelled detours or temporary roads to facilitate passage of traffic around restricted construction area:
 - .1 Do grading for detour in accordance with Section 31 23 13 - Roadway Embankments.
 - .2 Place and compact granular sub-base in accordance with Section 32 11 16 - Granular Sub-base.
 - .3 Place and compact granular base in accordance with Section 32 11 23 - Aggregate Base Courses.
- .6 Provide and maintain reasonable road access and egress to property fronting along Work under Contract and in other areas as indicated, unless other means of road access exist that meet approval of Departmental Representative.

1.5 INFORMATIONAL
AND WARNING DEVICES

- .1 Provide and maintain NSTIR approved temporary, fully actuated traffic signals; signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
 - .2 All traffic signs are to be bilingual or symbolic and shall be Level 1 reflectivity.
 - .3 Supply and erect signs, delineators, barricades and miscellaneous warning devices as specified in Part D, Temporary Conditions Signs and Devices, of MUTCD manual and Nova Scotia Temporary Workplace Traffic Control Manual.
 - .4 Place signs and other devices in locations recommended by NSTWTCM.
 - .5 Provide an Accredited Sign Supervisor, who has successfully completed the Temporary Workplace Traffic Control Training Course, to be on site at all times when active construction is taking place. The Accredited Traffic Control Sign Supervisor will be responsible to supervise the placement and dismantling of all temporary condition signs and devices that indicate to the road user that highway construction activity exist and also to ensure that proper traffic control procedures are carried out in
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1.5 INFORMATIONAL
AND WARNING DEVICES
(Cont'd)

- .5 (Cont'd)
accordance with the NSTWTCM. The Accredited Sign Supervisor is considered part of the contractors supervision and administration staff and compensation the provision of this individual is considered incidental to the Work.
- .6 A traffic control plan and emergency response plan must be approved by the Departmental Representative prior to commencing any Work.
- .7 Continually maintain traffic control devices in use by:
 - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Removing or covering signs which do not apply to conditions existing from day to day.

1.6 CONTROL OF
PUBLIC TRAFFIC

- .1 Provide traffic control personnel who have a valid provincial license and trained in accordance with, and properly equipped as specified in NSTWTCM manuals in following situations:
 - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.
 - .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
 - .3 When workmen or equipment are employed on travelled at locations where oncoming traffic would not otherwise have adequate warning.
 - .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
 - .5 For emergency protection when other traffic control devices are not readily available.
 - .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
 - .7 At each end of restricted sections where pilot vehicles are required.
 - .2 All Traffic Control Personnel shall be equipped with portable radios of sufficient range to ensure continuous communication within the traffic control zone.
 - .3 All construction vehicles shall operate in accordance with and are subject to traffic control restrictions and operations in place on the project.
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1.7 OPERATIONAL
REQUIREMENTS

- .1 Existing conditions for traffic within right- of-way containing work in this Contract are indicated by following descriptions:
 - .1 Section within Park Boundaries within contract limits are asphalt concrete surfaced two (2) lane undivided trunk roadway with posted speeds up to 80 km/h.
- .2 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified herein and approved by Departmental Representative to protect and control public traffic, existing conditions for traffic may be restricted as follows:
 - .1 In accordance with NSTWTCM.
 - .2 The maximum cumulative traffic delay associated with work carried out under this contract shall not exceed 15 minutes. Individual traffic control zone delay shall not exceed 15 minutes.
- .3 Temporary structures shall be constructed as indicated on approved shop drawing submitted to Departmental Representative. All existing dimensions to be verified prior to construction with any discrepancies reported to the Departmental Representative.
- .4 Road closures, unless otherwise approved by the Departmental Representative, shall be limited to the following:
 - .1 Approved 20 minute duration closures to facilitate phasing of traffic and to erect precast culvert segments. There shall be no more than 1-20 minutes closure in any consecutive 2 hour timeframe.
 - .2 Closure plans shall be set in place by the Contractor to ensure the safe passage of emergency vehicles throughout the construction area within 15 minutes of being alerted by emergency response personnel. The 15 minute emergency response time must be able to be met during all phases of construction and a dedicated on-site emergency phone line is to be set up by the Contractor to achieve this.

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

Not applicable.

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 Medical Surveillance: Where prescribed by federal or provincial legislation and regulations, and upon request by Departmental Representative, obtain and submit certification of medical surveillance for site personnel prior to commencement of Work.
 - .3 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:

Canadian Government Publishing
Public Works & Government Services Canada
Ottawa, Ontario, K1A 0S9

1.2 COMPLIANCE .5 (Cont'd)
REQUIREMENTS
(Cont'd)

Tel: (819) 956-4800 (1-800-635-7943)
Publication No. L31-85/2000 E or F

- .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 building employees and 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.
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| <u>1.4 SITE CONTROL
AND ACCESS
(Cont'd)</u> | .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. |
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| <u>1.5 PROTECTION</u> | .1 | Provide temporary facilities for protection and safe passage of building occupants, public pedestrians and vehicular traffic around and adjacent to work site. |
| | .2 | Provide safety barricades, lights and signage on work site as required to provide a safe working environment for workers. |
| | .3 | Carry out Work placing emphasis on health and safety of public, building employees, site personnel and protection of the environment. |
| | .4 | Contractor to provide warning sign stating that no pedestrians will be allowed on the bridge. |
| | .5 | 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. |
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| <u>1.6 FILING OF
NOTICE</u> | .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. |
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| <u>1.7 PERMITS</u> | .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. |
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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.
 - .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 Highway Traffic.
 - .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.
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1.10 SAFETY
MEETINGS
(Cont'd)

- .2 Provide site safety orientation session to all workers and other authorized persons prior to granting them access to work site. Brief persons on site conditions and on the minimum site safety rules in force at site.
- .3 Conduct site specific occupational health and safety meetings during the entire work as follows:
 - .1 Formal meetings on a minimum monthly basis
 - .2 Informal tool box meetings on a regular basis from a predetermined schedule.
- .4 Keep workers informed of anticipated hazards, on safety practices and procedures to be followed and of other pertinent safety information related to:
 - .1 Progress of Work;
 - .2 New sub-trades arriving on site and;
 - .3 Changes in site and project conditions.
- .5 Record and post minutes of meetings. Make copies available to Departmental Representative upon request.

1.11 HEALTH AND
SAFETY PLAN

- .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 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.

1.11 HEALTH AND
SAFETY PLAN
(Cont'd)

.2 (Cont'd)

.3 Part 3:(Cont'd)

.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, Facility Management and Tenant Departments, housed in buildings located in vicinity, where work is carried out. 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 List of critical construction activities to be communicated with the Facility Manager and designated tenant representatives which could affect facility and tenant operations, or pose a risk to the health and safety of their employees and to the general public. Develop list in consultation with the Departmental Representative.

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

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

.6 As Work progresses, review and update Plan addressing additional health risks and safety

1.11 HEALTH AND
SAFETY PLAN
(Cont'd)

- .2 (Cont'd)
- .3 Part 3:(Cont'd)
 - .6 (Cont'd)
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.
 - .6 Distribute monthly reports to subcontractors for their pursuance. Follow- up and ensure appropriate action and corrective measures are taken.
-

1.12 SAFETY
SUPERVISION
AND INSPECTIONS
(Cont'd)

- .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 Interruption to building operations with potential loss to owner or client in excess of \$5,000.00,
 - .4 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.
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|---|----|---|
| <u>1.17 HAZARDOUS
PRODUCTS
(Cont'd)</u> | .3 | Post all MSDS data sheets on site, in a common area, visible to workers. |
| | .4 | On building renovation projects where work is adjacent to occupied areas, locate data sheets in a public location accessible to tenant employees. |
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| <u>1.18 BLASTING</u> | .1 | Blasting or other use of explosives is not permitted. |
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| <u>1.19 POWDER
ACTUATED DEVICES</u> | .1 | Use powder actuated fastening devices only after receipt of written permission from Departmental Representative. |
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 | | |
| <u>1.20 POSTING
OF DOCUMENTS</u> | .1 | Post documents indicated herein and as required by Authority having jurisdiction. |
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 | | |
| <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. |
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 | | |
| <u>PART 2 - PRODUCTS</u> | | Not applicable. |
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| <u>PART 3 - EXECUTION</u> | | Not applicable. |

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 91 19 - Topsoil and Finish Grading
- .6 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 Alteration Specifications (2006) for Clear Span Permanent Bridges.
- .4 Nova Scotia Environment, Erosion and Sedimentation Control Handbook for Construction Sites.
- .5 Environment Canada, Section 36(3) of the Fisheries Act, prohibits the planned or accidental discharge of deleterious substances to waters frequented by fish.
- .6 Environment Canada, Migratory Birds Convention Act, prohibits 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.
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- 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 Environmental Assessment, Fisheries and Oceans Canada Letter of Advise, Navigable Waters Protection Permit and Nova Scotia Environment Water Approval Permit. The CEAA is available for viewing upon request to the Departmental Representative.
- .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. Duration can be expected to be approximately three hours. 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. To facilitate full comprehension of the requisite environmental protection performance of the proposed work, the contractor will be presented with a copy of the Environmental Screening Report as prepared by the Parks Canada.
- 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.
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1.5 SUBMITTALS
(Cont'd)

- .4 Environmental Protection Plan:(Cont'd)
- .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.
 - .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,

1.5 SUBMITTALS
(Cont'd)

- .4 Environmental Protection Plan:(Cont'd)
 - .13 (Cont'd)
disinfection water, hydrostatic test water, and water used in flushing of lines.
 - .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 No work camps or office facilities will be located within the boundaries of the Cape Breton Highlands National Park.
- .3 Work sites will be equipped with appropriate and properly maintained sanitary facilities.
- .4 Garbage must be collected and removed daily from the worksite to keep the site sanitary and to prevent unwanted interactions with Park fauna (e.g. bears). All material must be removed, transported and disposed of in accordance with existing provincial - municipal and Park solid waste disposal guidelines, project waste management plan and/or regulations.
- .5 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.
- .6 To reduce potential negative impacts on Park fauna (especially moose), noise control measures, such as properly functioning mufflers on equipment, must be in place.
- .7 Littering is prohibited.

1.7 FIRES

- .1 Fires and burning of rubbish on site is not permitted.
 - .2 Comply with the Fire Protection Regulations of the National Parks Act.
 - .3 In accordance with these Regulations, the Park Superintendent may restrict activities, or access to work areas, in the interest of fire prevention.
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1.7 FIRES
(Cont'd)

- .4 Equipment must be in proper working condition and be used in such a manner as to minimize the potential for ignition of vegetation.
- .5 Vehicles and stationary equipment must be equipped with fire suppression equipment such as an operable fire extinguisher.
- .6 If storage and/or operation of in-Park equipment during a high fire hazard season is of concern to the Park, the Contractor may be required to prepare and implement a Fire Suppression Contingency Plan.
- .7 The Departmental Representative and the Duty Warden of the Park 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.
- .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.
 - .8 Trees and other vegetation outside the excavation boundary should not be cut or removed; trees or snags posing a danger to operations would be an exception.
 - .9 Trees and debris should not be permitted to fall outside cleared areas or into water courses.
 - .10 Remove fallen trees and debris without injuring remaining trees and shrubs. Ropes, guys, or other means should be used where necessary for tree or debris removal.
 - .11 Whenever possible, store organic debris and topsoil removed during grading operations for use during site restoration. Locate such stockpiles well away from any stream or water body and should be covered with coarse material to minimize wind and water erosion.
 - .12 Cut trees as flush to the ground as possible.
 - .13 Delimb timber over 100 mm diameter and deliver to Parks Canada at the Ingonish campground.
 - .14 Carry out excavation for installation of new work grubbing operations where required. Disturb vegetative mat in the grubbing operations area only.
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- 1.10 SITE CLEARING AND PLANT PROTECTION
(Cont'd)
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- .15 Do not grub out stumps within 2 m of standing timber at the edge of the area to be cleared. This will minimize the danger of blowdown.
- .16 Revegetate areas that have been mistakenly grubbed or otherwise rehabilitated as soon as possible.
- .17 Should cultural resources artifacts be unearthed or discovered during project excavation, stop Work in that area and the Departmental Representative contacted immediately.
- 1.11 WORK ADJACENT TO WATERWAYS
-
- .1 Any required instream Work must be completed during the June 1 to September 30, 2015 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 detour construction adjacent waterway, containment of brook flow in reservoir constructed with sandbags together with discharge pipe as show on drawings, sediment control of site runoff, etc. Coordinate work with utility operating the water supply. Notify the utility immediately of any construction incident which may affect water quality.
- .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.
- .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 the environmental assessment and 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.
-

1.11 WORK ADJACENT
TO WATERWAYS
(Cont'd)

- .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 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area, by providing temporary enclosures.
- .4 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 There are no borrow areas available in the Park.
 - .4 All surplus excavated material must be removed from the Park as soon as possible and disposed of at an approved location and in an approved manner.
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1.13 EARTH
MOVEMENT
(Cont'd)

- .5 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.
- .6 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.
- .7 Stockpile topsoil from excavated sections for subsequent application to side slopes requiring revegetation. Avoid steep slopes on stockpiles in order to prevent erosion.
- .8 Leave areas of unstable clays undisturbed.
- .9 Do not remove aggregates from streams.
- .10 Install sediment traps, basins, or ponds, whether temporary or permanent, before construction begins on the rest of the site.
- .11 Dust control measures will be necessary, especially when asphalt is removed. The use of chemical dust control agents must be pre-approved by the Departmental Representative.
- .12 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
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1.14 EROSION AND
SEDIMENTATION
CONTROL
(Cont'd)

- .2 (Cont'd)
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 a Fuel and 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.
- .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 and the Park Warden 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.
- .5 Storage of large amounts of fuel (more than 900 L) in the Park is not permitted. Refuelling of on-line equipment from storage facilities located outside Park boundaries is strongly preferred. Storage of any fuel has to occur only in previously approved locations, and with Park consent. Effect the

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- 1.15 HAZARDOUS MATERIALS
(Cont'd)
- .5 (Cont'd)
containment and cleanup of all spills related to the Work.
- .6 Storage of hazardous material, including explosives, shall not be permitted within the Park, except for quantities which shall normally be expected to be utilized in a day of Work, and which are not permitted to stockpile.
- .7 Emulsion storage tanker and transfer of emulsion from tanker to spray vehicle are not permitted within National Park.
- 1.16 TREATED WOOD
- .1 Creosote is not approved for use in Parks.
- .2 Workers will be made aware of the possible health risks associated with exposure to CCA or creosote treated timber as well as the recommended safe practices for handling such materials.
- .3 Disposal of treated wood wastes including saw-dust must be outside of the Park, and in accordance with all applicable Provincial and Municipal regulations. Similar attention must be given to disposal of the replaced guiderail posts which have been treated with creosote.
- 1.17 SITE DECOMMISSIONING
- .1 Unless prior permission from the Departmental Representative is obtained, all equipment, facilities and materials must be removed from the Park at the finish of each work phase, or if Work is suspended due to weather or other circumstance, upon the suspension of Work activities.
- .2 All work sites must be returned to a neat and tidy condition upon site abandonment.
- PART 2 - PRODUCTS Not applicable.
- PART 3 - EXECUTION Not applicable.
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PART 1 - GENERAL

- | | |
|---|---|
| <u>1.1 RELATED SECTIONS</u> | <ul style="list-style-type: none">.1 Section 01 11 00 - General Instructions.2 Section 01 35 00 - Traffic Regulations.3 Section 01 35 30 - Health and Safety.4 Section 01 35 43 - Environmental Procedures.5 Section 31 25 00 - Erosion and Sediment Control |
| <u>1.2 REFERENCES AND CODES</u> | <ul style="list-style-type: none">.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:<ul style="list-style-type: none">.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. |
| <u>1.3 HAZARDOUS MATERIAL DISCOVERY</u> | <ul style="list-style-type: none">.1 Stop work immediately when material suspected as being hazardous is encountered during demolition work. Notify Departmental Representative immediately. |

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

Not applicable.

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.
 - .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of
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|---|----|---|
| <u>1.2 INDEPENDENT
INSPECTION AGENCIES
(Cont'd)</u> | .4 | (Cont'd)
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. |
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 | | |
| <u>1.3 ACCESS TO WORK</u> | .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. |
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| <u>1.4 PROCEDURES</u> | .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. |
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| <u>1.5 REPORTS</u> | .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. |
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| <u>1.6 TESTS AND MIX
DESIGNS</u> | .1 | Furnish test results and mix designs as requested. |
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| <u>PART 2 - PRODUCTS</u> | | Not applicable. |
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| <u>PART 3 - EXECUTION</u> | | Not applicable. |

PART 1 - GENERAL

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| <u>1.1 RELATED SECTIONS</u> | <ul style="list-style-type: none">.1 Section 01 33 00 - Submittal Procedures.2 Section 01 35 00 - Traffic Regulation.3 Section 01 35 30 - Health and Safety.4 Section 01 35 43 - Environmental Protection.5 Section 01 56 00 - Temporary Barriers and Enclosures |
| <u>1.2 REFERENCES</u> | <ul style="list-style-type: none">.1 Canadian General Standards Board (CGSB)<ul style="list-style-type: none">.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)<ul style="list-style-type: none">.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. |
| <u>1.3 SUBMITTALS</u> | <ul style="list-style-type: none">.1 Provide submittals in accordance with Section 01 33 00. |
| <u>1.4 SCAFFOLDING</u> | <ul style="list-style-type: none">.1 Scaffolding in accordance with CAN/CSA-S269.2..2 Provide and maintain scaffolding, ramps, ladders, swing staging, platforms, temporary stairs as required. |
| <u>1.5 HOISTING</u> | <ul style="list-style-type: none">.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. |
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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 No signs or advertisements, other than warning signs, are permitted on site.
 - .2 Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321.
 - .3 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Departmental Representative.
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1.11 PROTECTION AND MAINTENANCE OF TRAFFIC .1 Refer to Section 01 35 00.

- 1.12 CLEAN-UP
- .1 Remove construction debris, waste materials, packaging material from work site daily.
 - .2 Clean dirt or mud tracked onto paved or surfaced roadways.
 - .3 Store materials resulting from demolition activities that are salvageable.
 - .4 Stack stored new or salvaged material not in construction facilities.

PART 2 - PRODUCTS Not applicable.

PART 3 - EXECUTION

- 3.1 GENERAL .1 Construct and maintain construction facilities in accordance with applicable Sections contained in these specification.

PART 1 - GENERAL

<u>1.1 RELATED SECTIONS</u>	.1	Section 01 35 00 - Traffic Regulation
	.2	Section 01 35 30 - Health and Safety
<u>1.2 INSTALLATION AND REMOVAL</u>	.1	Provide temporary controls in order to execute Work expeditiously.
	.2	Remove from site all such Work after use.
<u>1.3 GUARD RAILS AND BARRICADES</u>	.1	Provide secure, rigid guard rails and barricades around deep excavations and open edges of structures, or as indicated in Contract Documents.
	.2	Provide as required by governing authorities and as directed.
<u>1.4 ACCESS TO SITE</u>	.1	Provide and maintain access roads, ramps and construction runways as may be required for access to Work.
<u>1.5 FIRE ROUTES</u>	.1	Maintain access to property including overhead clearances for use by emergency response vehicles.
<u>1.6 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY</u>	.1	Protect surrounding private and public property from damage during performance of Work.
	.2	Be responsible for damage incurred.
<u>1.7 WASTE MANAGEMENT AND DISPOSAL</u>	.1	Separate waste materials.

PART 2 - PRODUCTS Not applicable.

PART 3 - EXECUTION Not applicable.

PART 1 - GENERAL

- 1.1 INSPECTION AND DECLARATION
- .1 Contractor's Inspection: 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 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.

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

Not applicable.

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.
 - .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.
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| <u>3 WARRANTIES AND BONDS</u>
(Cont'd) | .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. |
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| <u>4 RECORD DRAWINGS</u> | .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. |