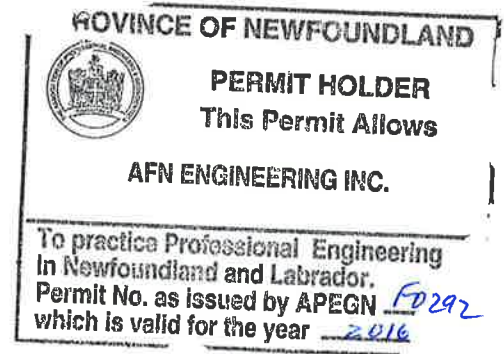


SPECIFICATION

REPAIRS TO LIGHTKEEPER'S DWELLING AND ANCILLARY STRUCTURES  
GREEN ISLAND (CATALINA), NL  
PURCHASE ORDER NUMBER FP802-160132

PREPARED FOR  
Fisheries and Oceans Canada

DATE  
June 11, 2016  
Revision 2



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LIST OF DRAWINGS

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DRAWING NO

TITLE

02C1103A00601C1

Lightkeeper's Dwelling

02C1103A00601C2

Equipment Building, Skeletal Tower and Fog Horn

02C1103A00601C3

Boardwalk

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1.1 SCOPE

- .1 The work consists of the furnishing of all plant, labour, equipment and material for repairs to the lightkeeper's dwelling and ancillary structures at Green Island (Catalina), NL, in strict accordance with specifications and accompanying drawings and subject to all terms and conditions of the Contract.

1.2 DESCRIPTION OF  
WORK

- .1 In general, work under this contract consists of, but will not necessarily be limited to, the following:
- .1 Lightkeeper's dwelling: re-painting the wooden exterior (including the patio); repairs to damaged shingles; repairs to the eavestrough; replacement of exterior light fixtures; and supply/installation of a new basement door/frame.
  - .2 Equipment building: re-painting the wooden exterior; replacement of the concrete approach/landing at the entrance; replacement of 2 baseboard heaters; and sealing of cracks in the floor slab.
  - .3 Re-painting of the steel and concrete surfaces associated with the foghorn and skeletal tower.
  - .4 Construction of a new treated timber boardwalk.

Do not proceed with any portion of the work until the Departmental Representative has approved the Contractor's written site specific safety plan and demolition work plan. Do all painting work in strict accordance with manufacturer's written instructions (including

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correct moisture, humidity and temperature conditions).

- 1.3 SITE OF WORK .1 Work will be carried out at Green Island (Catalina), NL. The site is remote and only accessible by helicopter or boat.
- 1.4 DATUM .1 Datum used for this project is Lowest Normal Tides (LNT). If requested by the Contractor, the Departmental Representative will establish a benchmark prior to the start of work activities.
- .2 Bidders are advised to consult the Tide Tables issued by Fisheries and Oceans in order to make sure of the tidal conditions affecting work.
- 1.5 FAMILIARIZATION WITH SITE .1 Before submitting a bid, it is required that bidders visit the site and its surroundings to review and verify the form, nature and extent of the work, materials needed for the completion of the work, the means of access to the site, severity, exposure and uncertainty of weather, soil conditions, any accommodations they may require, and in general shall obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid or costs to do the work. No allowance shall be made subsequently in this connection on account of error or negligence to properly observe and determine the conditions that will apply.
- .2 Contractors, bidders or those they invite

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to site are to review specification  
Section 01 35 29 - Health and Safety  
Requirements before visiting site. Take  
all appropriate safety measures for any  
visit to site, either before or after  
acceptance of bid.

- .3 Obtain prior permission from the  
Departmental Representative before  
carrying out such site inspection.

1.6 CODES AND  
STANDARDS

- .1 Perform work in accordance with the latest  
edition of the National Building Code of  
Canada, and any other code of provincial  
or local application including all  
amendments up to project bid closing date  
provided that in any case of conflict or  
discrepancy, the more stringent  
requirements shall apply.
- .2 Materials and workmanship must meet or  
exceed requirements of specified  
standards, codes and referenced documents.

1.7 TERM ENGINEER

- .1 Unless specifically stated otherwise, the  
term Engineer where used in the  
Specifications and on the Drawings shall  
mean the Departmental Representative.

1.8 SETTING OUT  
WORK

- .1 Set grades and layout work in detail from  
control points and grades established by  
Departmental Representative.
- .2 Assume full responsibility for and execute  
complete layout of work to locations,  
lines and elevations indicated or as  
directed by Departmental Representative.
- .3 Provide devices needed to layout and  
construct work.

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.4 Supply such devices required to facilitate  
Departmental Representative's inspection  
of work.

.5 Supply stakes and other survey markers  
required for laying out work.

1.9 COST BREAKDOWN

.1 Before submitting first progress claim  
submit breakdown of Contract price in  
detail as directed by Departmental  
Representative and aggregating contract  
price.

.2 Provide cost breakdown in same format as  
the numerical and subject title system  
used in this specification project manual  
and thereafter sub-divided into major work  
components as directed by Departmental  
Representative.

.3 Upon approval by Departmental  
Representative, cost breakdown will be  
used as basis for progress payment.

.4 This will be a lump sum project.  
Individual work items will not be measured  
separately for payment.

1.10 WORK SCHEDULE

.1 Submit within 7 work days of notification  
of acceptance of bid, a construction  
schedule showing commencement and  
completion of all work within the time  
stated on the Bid and Acceptance Form and  
the date stated in the bid acceptance  
letter.

.2 Provide sufficient details in schedule to  
clearly illustrate entire implementation

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plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.

- .3 As a minimum, work schedule to be prepared and submitted in the form of Bar (GANTT) Charts, indicating work activities, tasks and other project elements, their anticipated durations and planned dates for achieving key activities and major project milestones provided in sufficient details and supported by narratives to demonstrate a reasonable plan for completion of project within designated time. Generally Bar Charts derived from commercially available computerized project management system are preferred but not mandatory.
- .4 Submit schedule updates on a minimum bi-weekly basis and more often, when requested by Departmental Representative, due to frequent changing project conditions. Provide a narrative explanation of necessary changes and schedule revisions at each update.
- .5 The schedule, including all updates, shall be to Departmental Representative's approval. Take necessary measures to complete work within approved time. Do not change schedule without Departmental Representative's approval.
- .6 All work on the project will be completed within the time indicated on the Bid and Acceptance Form.



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1.11 ABBREVIATIONS

- .1 Following abbreviations of standard specifications have been used in this specification and on the drawings:

CGSB - Canadian Government Specifications Board

CSA - Canadian Standards Association

NLGA - National Lumber Grades Authority

ASTM - American Society for Testing and Materials

- .2 Where these abbreviations and standards are used in this project, latest edition in effect on date of bid call will be considered applicable.

1.12 SITE  
OPERATIONS

- .1 Arrange for sufficient space adjacent to project site for conduct of operations, storage of materials and so on. Exercise care so as not to obstruct or damage public or private property in area. All arrangements for space and access will be made by Contractor.

1.13 PROJECT  
MEETINGS

- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording minutes.
- .2 Project meetings will take place on site of work unless so directed by the Departmental Representative.
- .3 Departmental Representative will assume responsibility for recording minutes of meetings and forwarding copies to all parties present at the meetings.
- .4 Have a responsible member of firm present at all project meetings.

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1.14 PROTECTION

- .1 Store all materials and equipment to be incorporated into work to prevent damage by any means.
- .2 Repair or replace all materials damaged in transit or storage to the satisfaction of Departmental Representative and at no cost to Canada.

1.15 EXISTING  
SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to site operations, and tenant operations.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility.
- .4 Provide temporary services when directed by Departmental Representative to maintain critical facility systems.
- .5 Provide adequate bridging over trenches which cross walkways or roads to permit normal traffic.
- .6 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .7 When inactive services are encountered,

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cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.

1.16 DOCUMENTS  
REQUIRED

- .1 Maintain at job site, one copy each of the following:
  - .1 Contract Drawings
  - .2 Specifications
  - .3 Addenda
  - .4 Contract and any resulting amendments signed by contracting authority.
  - .5 Test Reports
  - .6 Copy of Approved Work Schedule
  - .7 Site specific Health and Safety Plan and other safety related documents.

1.17 PERMITS

- .1 Obtain and pay for all permits, certificates and licenses as required by Municipal, Provincial, Federal and other Authorities.
- .2 Provide appropriate notifications of project to municipal and provincial inspection authorities.
- .3 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.
- .4 Submit to Departmental Representative, copy of application submissions and approval documents received for above referenced authorities.
- .5 Comply with all requirements, recommendations and advice by all regulatory authorities unless otherwise

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agreed in writing by Departmental Representative. Make requests for such deviations to these requirements sufficiently in advance of related work.

1.18 CUTTING,  
FITTING AND  
PATCHING

- .1 Execute cutting, including excavation, fitting and patching required to make work fit properly.

1.19 ACCEPTANCE

- .1 Prior to the issuance of the Certificate of Substantial Performance, in company with Departmental Representative, make a check of all work. Correct all discrepancies before final inspection and acceptance.

1.20 WORKS  
COORDINATION

- .1 Responsible for coordinating the work of the various trades, where the work of such trades interfaces with each other.
- .2 Convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required. Provide each trade with the plans and specifications of the interfacing trade, as required, to assist them in planning and carrying out their respective work.
- .3 Canada will not be responsible for or held accountable for any extra costs incurred as a result of the failure to carry out coordination work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor and shall be resolved at no extra cost to Canada.

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1.21 CONTRACTOR'S  
USE OF SITE

- .1 Responsible for arranging the storage of materials on or off site, and any materials stored at the site which interfere with any of the day to day activities at or near the site will be moved promptly at the Contractor's expense, upon request by Departmental Representative.
- .2 Exercise care so as not to obstruct or damage public or private property in the area.
- .3 At completion of work, restore area to its original condition. Damage to ground and property will be repaired by Contractor. Remove all construction materials, residue, excess, etc., and leave site in a condition acceptable to Departmental Representative.

1.22 WORK  
COMMENCEMENT

- .1 Mobilization to project site is to commence immediately after acceptance of bid and submission of Site Specific Safety Plan and insurance and bonding documentation, unless otherwise agreed by Departmental Representative.
- .2 Project work on site is to commence as soon as possible, with a continuous reasonable work force, unless otherwise agreed by Departmental Representative.
- .3 Weather conditions, short construction season, delivery challenges and the location of the work site may require the use of longer working days and additional work force to complete the project within the specified completion time.

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- .4 Make every effort to ensure that sufficient material and equipment is delivered to site at the earliest possible date after acceptance of bid and replenished as required.

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PART 1 - GENERAL

1.1 SECTION  
INCLUDES

- .1 Product data.
- .2 Samples.
- .3 Certificates.

1.2 SUBMITTAL  
GENERAL REQUIREMENTS

- .1 Submit to Departmental Representative for review submittals listed, including samples, certificates and other data, as specified in other sections of the Specifications. Note that any and all changes to the contract will have to be approved in writing by the Contracting Authority.
- .2 Submit with reasonable promptness and in orderly sequence so as to allow for Departmental Representative's review and not cause delay in Work. Failure to submit in ample time will not be considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
- .3 Do not proceed with work until relevant submissions are reviewed by Departmental Representative.
- .4 Present product data, samples and mock-ups in SI Metric units.
- .5 Where items or information is not produced in SI Metric units, provide soft converted values.
- .6 Review submittals prior to submission to

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Departmental Representative. Ensure during review that necessary requirements have been determined and verified, required field measurements or data have been taken, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents.

- .1 Submittals not stamped, signed, dated and identified as to specific project will be returned unexamined by Departmental Representative and considered rejected.
- .7 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .8 Verify field measurements and affected adjacent work and coordinate.
- .9 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .10 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.
- .11 Submittal format: paper originals, or alternatively clear and fully legible photocopies of originals. Facsimiles are not acceptable, except in special circumstances pre-approved by Departmental Representative. Poorly printed non-legible photocopies or facsimiles will not be accepted and be returned for resubmission.



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- .12 Make changes or revision to submissions which Departmental Representative may require, consistent with Contract Documents and resubmit as directed by Departmental Representative. When resubmitting, notify Departmental Representative in writing of any revisions other than those requested.
- .13 Keep one reviewed copy of each submittal document on site for duration of Work.

1.3 PRODUCT DATA

- .1 Product data includes 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 sufficient copies of product data which are required by the General Contractor and sub-contractors plus 2 copies which will be retained by Departmental Representative. Ensure sufficient numbers are submitted to enable one complete set to be included in each of the maintenance manuals specified, if applicable.
- .3 Allow 10 calendar days for Departmental Representative's review of each submission.
- .4 Adjustments or corrections made on product data by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, advise Departmental Representative in writing prior to proceeding with Work.
- .5 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections and

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comments are made, fabrication and installation may proceed upon receipt of shop drawings. If product data are rejected and noted to be Resubmitted, do not proceed with that portion of work until resubmission and review of corrected product data, through same submission procedures indicated above.

- .6 Accompany each submission with transmittal letter, containing:
  - .1 Date.
  - .2 Project title and project number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each product data and sample.
  - .5 Other pertinent data.
- .7 Submissions shall include:
  - .1 Date and revision dates.
  - .2 Project title and project 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 Cross references to particular details of contract drawings and specifications section number for which product data submission addresses.
  - .6 Details of appropriate portions of Work.
- .8 After Departmental Representative's review, distribute copies.
- .9 The review of product data by the Departmental Representative or their delegated representative is for sole purpose of

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ascertaining conformance with general concept. This review shall not mean that Public Works and Government Services Canada approves the detail design inherent in the product data, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in product data or of responsibility for meeting all requirements of the construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.

1.4 SCHEDULES,  
PERMITS AND  
CERTIFICATES

- .1 Upon acceptance of bid, submit to Departmental Representative copy of Work Schedule and various other schedules, permits, certification documents and project management plans as specified in other sections of the Specifications.
- .2 Submit copy of permits, notices, compliance Certificates received by Regulatory Agencies having jurisdiction and as applicable to the Work.
- .3 Submission of above documents to be in accordance with Submittal General Requirements procedures specified in this section.

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- 1.1 SECTION INCLUDES .1 Fire Safety Requirements.  
.2 Hot Work Permit.
- 1.2 RELATED WORK .1 Section 01 35 29 - Health and Safety Requirements.
- 1.3 REFERENCES .1 Fire Protection Standards issued by Fire Protection Services of Human Resources Development Canada as follows:  
.1 National Fire Code - Standard for Construction Operations - latest edition ([http://www.hrsdc.gc.ca/eng/labour/fire\\_protection/policies\\_standards/commissioner/301/page00.shtml](http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/301/page00.shtml)).  
.2 National Fire Code - Standard for Welding and Cutting - latest edition ([http://www.hrsdc.gc.ca/eng/labour/fire\\_protection/policies\\_standards/commissioner/302/page00.shtml](http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/302/page00.shtml)).  
.3 FCC standards, may also be viewed at the Regional Labour Canada Office located at Baine Johnson Centre, 10 Fort William Place, St. John's, NL, A1C 1K4; Telephone 1-800-641-4049; fax 1-709-772-5985.
- 1.4 DEFINITIONS .1 Hot Work defined as:  
.1 Welding work.  
.2 Cutting of materials by use of torch or other open flame devices.  
.3 Grinding with equipment which produces sparks.
- 1.5 SUBMITTALS .1 Submit copy of Hot Work Procedures and sample

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of Hot Work permit to Departmental Representative for review, within five (5) calendar days after notification of acceptance of bid.

- .2 Submit in accordance with the Submittal General Requirements specified in Section 01 33 00.

1.6 FIRE SAFETY  
REQUIREMENTS

- .1 Implement and follow fire safety measures during Work. Comply with following:
  - .1 National Fire Code, latest edition.
  - .2 Fire Protection Standards FCC 301 and FCC 302 - latest edition.
  - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 29 - Health and Safety Requirements.
- .2 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.

1.7 HOT WORK  
AUTHORIZATION

- .1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot work on site.
- .2 To obtain authorization submit to Departmental Representative:
  - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
  - .2 Description of the type and frequency

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of Hot Work required.

.3 Sample Hot Work Permit to be used.

.3 Upon review and confirmation that effective fire safety measures will be implemented during performance of hot work, Departmental Representative will provide authorization to proceed as follows:

.1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;

.2 Separate work, or segregate certain parts of work, into individual entities. Each entity requiring a separately written "Authorization to Proceed" from Departmental Representative. Follow Departmental Representative's directives in this regard.

.4 Requirement for individual authorization based on:

.1 Nature or phasing of work;

.2 Risk to Facility operations;

.3 Quantity of various trades needing to perform hot work on project or;

.4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.

.5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.

1.8 HOT WORK  
PROCEDURES

.1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.

.2 Procedures to include:

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- .1 Requirement to perform hazard assessment of site and immediate hot work area for each hot work event in accordance with Hazard Assessment and Safety Plan requirements of Section 01 35 29.
  - .2 Use of a Hot Work Permit system for each hot work event.
  - .3 The step by step process of how to prepare and issue permit.
  - .4 Permit shall be issued by Contractor's site Superintendent, or other authorized person designated by Contractor, granting permission to worker or subcontractor to proceed with hot work.
  - .5 Provision of a designated person to carryout a Fire Safety Watch for a minimum of 60 minutes immediately upon completion of the hot work.
  - .6 Compliance with fire safety codes and standards specified herein and occupational health and safety regulations specified in Section 01 35 29.
- .3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Clearly label as being the Hot Work Procedures applicable to this contract.
  - .4 Hot Work Procedures shall clearly establish worker instructions and allocate responsibilities of:
    - .1 Worker(s),
    - .2 Authorized person issuing the Hot Work Permit,
    - .3 Fire Safety Watcher,
    - .4 Subcontractors and Contractor.
  - .5 Brief all workers and subcontractors on Hot Work Procedures and Permit system established

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for project. Stringently enforce compliance.

.1 Failure to comply with the established procedures may result in the issuance of a Non-Compliance Notification at Departmental Representative's discretion with possible disciplinary measures imposed as specified in Section 01 35 29.

1.9 HOT WORK  
PERMIT

.1 Hot Work Permit to include, as a minimum, the following data:

.1 Project name and project number.

.2 Building name, address and specific room or area where hot work will be performed.

.3 Date when permit issued.

.4 Description of hot work type to be performed.

.5 Special precautions required, including type of fire extinguisher needed.

.6 Name and signature of person authorized to issue the permit.

.7 Name of worker (clearly printed) to which the permit is being issued.

.8 Time Duration that permit is valid (not to exceed 8 hours). Indicate start time and date, and completion time and date.

.9 Worker signature with date and time upon hot work termination.

.10 Specified time period requiring safety watch.

.11 Name and signature of designated Fire Safety Watcher, complete with time and date when safety watch terminated, certifying that surrounding area was under continual surveillance and inspection during the full watch time period specified in Permit and commenced immediately upon completion of Hot Work.

.2 Permit to be typewritten form. Industry Standard forms shall only be used if all data



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specified above is included on form.

- .3 Each Hot Work Permit to be completed in full and signed as follows:
  - .1 Authorized person issuing Permit before hot work commences.
  - .2 Worker upon completion of Hot Work.
  - .3 Fire Safety Watcher upon termination of safety watch.
  - .4 Returned to Contractor's Site Superintendent for safe keeping.

1.10 DOCUMENTS  
ON SITE

- .1 Keep Hot Work Permits and Hazard assessment documentation on site for duration of Work.
- .2 Upon request, make available to Departmental Representative or to authorized safety representative for inspection.

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- 1.1 SECTION INCLUDES .1 Procedures to isolate and lockout electrical facility or other equipment from energy source.
- 1.2 RELATED WORK .1 Section 01 35 24 - Fire Safety Requirements.  
.2 Section 01 35 29 - Health and Safety Requirements.
- 1.3 REFERENCES .1 C22.1-06 - Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.  
.2 CAN/CSA C22.3 No. 1-10 - Overhead Systems.  
.3 CAN/CSA C22.3 No. 7-10 - Underground Systems.  
.4 COSH, Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- 1.4 DEFINITIONS .1 Electrical Facility: means any system, equipment, device, apparatus, wiring, conductor, assembly or part thereof that is used for the generation, transformation, transmission, distribution, storage, control, measurement or utilization of electrical energy, and that has an amperage and voltage that is dangerous to persons.  
.2 Guarantee of Isolation: means a guarantee by a competent person in control or in charge that a particular facility or equipment is isolated.  
.3 De-energize: in the electrical sense, that

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a piece of equipment is isolated and grounded, e.g. if the equipment is not grounded, it cannot be considered de-energized (DEAD).

- .4 Guarded: means that an equipment or facility is covered, shielded, fenced, enclosed, inaccessible by location, or otherwise protected in a manner that, to the extent that is reasonably practicable, will prevent or reduce danger to any person who might touch or go near such item.
- .5 Isolate: means that an electrical facility, mechanical equipment or machinery is separated or disconnected from every source of electrical, mechanical, hydraulic, pneumatic or other kind of energy that is capable of making it dangerous.
- .6 Live/alive: means that an electrical facility produces, contains, stores or is electrically connected to a source of alternating or direct current of an amperage and voltage that is dangerous or contains any hydraulic, pneumatic or other kind of energy that is capable of making the facility dangerous to persons.

1.5 COMPLIANCE  
REQUIREMENTS

- .1 Perform lockouts in compliance with:
  - .1 Canadian Electrical Code.
  - .2 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 29.
  - .3 Regulations and code of practice as applicable to mechanical equipment or other machinery being de-energized.
  - .4 Procedures specified herein.

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- .2 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.

1.6 SUBMITTALS

- .1 Submit copy of proposed Lockout Procedures and sample form of lockout permit or lockout tags for review.
- .2 Submit documentation within 7 calendar days of acceptance of bid. Do not proceed with work until submittal has been reviewed by Departmental Representative.
- .3 Submit above documents in accordance with the submittal requirements specified in Section 01 33 00.
- .4 Resubmit Lockout Procedures with noted revisions as may result from Departmental Representative's review.

1.7 ISOLATION OF  
EXISTING SERVICES

- .1 Obtain Departmental Representative's written authorization prior to conducting work on an existing active, energized service or facility required as part of the work and before proceeding with lockout of such services or facility.
- .2 To obtain authorization, submit to Departmental Representative the following documentation:
  - .1 Written Request for Isolation of the service or facility and;

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- .2 Copy of Contractor's Lockout Procedures.
- .3 Make a Request for Isolation for each event, unless directed otherwise by Departmental Representative, and as follows:
  - .1 Fill-out standard forms in current use at the Facility when so directed by Departmental Representative or;
  - .2 Where no form exist at Facility, make request in writing identifying:
    - .1 Identification of system or equipment to be isolated, including it's location;
    - .2 Time duration, indicating Start time and date, and Completion time and date when isolation will be in effect;
    - .3 Voltage of service feed to system or equipment being isolated;
    - .4 Name of person making the request.
  - .3 Document to be in typewritten format.
- .4 Do not proceed until receipt of written notification from Departmental Representative granting the Isolation Request and authorization to proceed with the isolation of designated equipment or facility. Departmental Representative may designate other individual at the Facility as the person authorized to grant the Isolation Request.
- .5 Conduct safe, orderly shut down of equipment or facilities, de-energize and isolate power and other sources of energy and lockout items in accordance with requirement of clause 1.8 below.
- .6 Plan and schedule shut down of existing

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services in consultation with the Departmental Representative and the Facility Manager. Minimize impact and downtime of facility operations.

- .7 Determine in advance, as much as possible, in cooperation with the Departmental Representative, the type and frequency of situations which will require a Request for Isolation. Follow Departmental Representative's directives in this regard.
- .8 Conduct hazard assessment as part of the planning process of isolating existing equipment and facilities. Hazard Assessments to conform with requirements of Health and Safety Section 01 35 29.

1.8 LOCKOUTS

- .1 Isolate and lockout electrical facilities, mechanical equipment and machinery from all potential energy sources prior to starting work on such items.
- .2 Develop and implement lockout procedures to be followed on site as an integral part of the Work.
- .3 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.
- .4 Use industry standard lockout tags.
- .5 Provide appropriate safety grounding and guards as required.
- .6 Prepare Lockout Procedures in writing.

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Describe safe work practices, work functions and sequence of activities to be followed on site to safely isolate all potential energy sources and lockout/tagout facilities and equipment.

- .7 Include within procedures a system of worker request and issuance of individual lockout permit by a person, employed by Contractor, designated to be "in-charge" and being responsible for:
  - .1 Controlling issuance of permits or tags to workers.
  - .2 Determining permit duration.
  - .3 Maintaining record of permits and tags issued.
  - .4 Submitting a Request for Isolation to Departmental Representative when required in accordance with Clause 1.7 above.
  - .5 Designating a Safety Watcher, when one is required based on type of work.
  - .6 Ensuring equipment or facility has been properly isolated, providing a Guarantee of Isolation to worker(s) prior to proceeding with work.
  - .7 Collecting and safekeeping lockout tags, returned by workers, as a record of the event.
  
- .8 Clearly establish, describe and allocate, within procedures, the responsibilities of:
  - .1 Workers.
  - .2 Designated person controlling issuance of lockout tags/permits.
  - .3 Safety Watcher.
  - .4 Subcontractors and General Contractor.
  
- .9 Procedures shall meet the requirements of Codes and Regulations specified in clause 1.5

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above.

- .10 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the procedures applicable to this contract.
  - .1 Incorporate site specific rules and procedures established by Facility Manager and in force at site. Obtain such procedures through Departmental Representative.
- .11 Procedures to be in typewritten format.
- .12 Submit copy of Lockout Procedures to Departmental Representative, in accordance with submittal requirements of clause 1.6 herein, prior to commencement of work.

#### 1.9 CONFORMANCE

- .1 Ensure that lockout procedures, as established for project on site, are stringently followed. Enforce use and compliance by all workers.
- .2 Brief all persons working on electrical facilities, mechanical and other equipment fed by an energy source on requirements of this section.
- .3 Failure to perform lockouts in accordance with regulatory requirements or follow procedures specified herein may result in the issuance of a Non-Compliance Notification at Departmental Representative's discretion with possible disciplinary measures imposed as specified in Section 01 35 29.

#### 1.10 DOCUMENTS ON SITE

- .1 Post Lockout Procedures on site in common location for viewing by workers.



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SPECIAL PROCEDURES  
ON LOCKOUT REQUIREMENTS

Section 01 35 25  
Page 8

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- .2 Keep copies of Request for Isolation submitted to Departmental Representative and lockout permits or tags issued to workers during the course of work for full project duration.
- .3 Upon request, make such data available to Departmental Representative or to authorized safety representative for inspection.

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- 1.1 RELATED WORK .1 Section 01 35 24 - Special Procedures on Fire Safety Requirements.
- 1.2 DEFINITIONS .1 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2 Competent Person: means a person who is:
- .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
  - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
  - .3 Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .3 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .4 PPE: personal protective equipment.
- .5 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.
- 1.3 SUBMITTALS .1 Make submittals in accordance with Section

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01 33 00.

- .2 Submit to Departmental Representative, copies of the following documents including updates.
  - .1 Site specific Health and Safety Plan.
  - .2 Building permit, compliance certification and other permits obtained.
  - .3 Reports or directives issued by Federal and Provincial Inspectors and other Authorities having jurisdiction.
  - .4 Accident or incident reports.
  - .5 WHMIS - MSDS data sheets.
  - .6 Name of Contractor's Representative designated to perform health and safety supervision in site.
  - .7 Certificate of clearance from Workplace Health Safety and Compensation Commission (Assessment Services Department) of Newfoundland and Labrador.
- .3 Submit within five (5) work days of notification of Bid Acceptance. Provide one (1) copy.
- .4 Departmental Representative will review Health and Safety Plan and provide comments.
- .5 The Contractor will revise the Plan as appropriate and resubmit within five (5) work days after receipt of comments.
- .6 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for

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Occupational Health and Safety of the  
Work.

.7 Submit revisions and updates made to  
the Plan during the course of Work.

1.4 COMPLIANCE  
REQUIREMENTS

.1 Comply with the Occupational Health and  
Safety Act for the Province of  
Newfoundland and Labrador, and the  
Occupational Health and Safety Regulations  
made pursuant to the Act.

.2 Comply with Canada Labour Code Part II,  
(entitled Occupational Health and Safety)  
and the Canada Occupational Health and  
Safety Regulations (COSH) as well as any  
other regulations made pursuant to the  
Act.

.1 The Canada Labour Code can be viewed at:  
[www.http://laws.justice.gc.ca/en/L-2/](http://laws.justice.gc.ca/en/L-2/)

.2 COSH can be viewed at:  
[www.http://laws.justice.gc.ca/eng/SOR-  
86-304/ne.html](http://laws.justice.gc.ca/eng/SOR-86-304/ne.html).

.3 A copy may be obtained at: Canadian  
Government Publishing Public Works &  
Government Services Canada Ottawa,  
Ontario, K1A 0S9 Tel: (819) 956-4800 (1-  
800-635-7943) Publication No. L31-  
85/2000 E or F).

.3 Observe construction safety measures of:  
.1 Part 8 of National Building Code.  
.2 Municipal by-laws and ordinances.

.4 In case of conflict or discrepancy between  
any specified requirements, the more  
stringent shall apply.

.6 Maintain Workers Compensation Coverage in

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good standing for duration of Contract.  
Provide proof through submission of  
Certificate of Clearance from Workplace  
Health, Safety and Compensation Commission  
(Assessment Services Department) of  
Newfoundland and Labrador.

- .7 Obtain and maintain worker medical  
surveillance documentation where  
prescribed by legislation or regulation.

1.5 RESPONSIBILITY

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

1.6 SITE CONTROL  
AND ACCESS

- .1 Control the Work and entry points to Work  
Site. Approve and grant access only to  
workers and authorized persons.  
Immediately stop and remove non-authorized  
persons.
  - .1 Departmental Representative will  
provide names of those persons  
authorized by Departmental  
Representative to enter onto Work Site  
and will ensure that such authorized  
persons have the required knowledge and  
training on Health and Safety pertinent

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to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.

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

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- 1.7 PROTECTION .1 Give precedence to safety and health of persons and protection of environment over cost and schedule considerations for Work.
- .2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.
- 1.8 FILING OF NOTICE .1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work.
- 1.9 PERMITS .1 Post permits, licenses and compliance certificates, specified in section 01 10 10, at Work Site.
- .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.
- 1.10 HAZARD ASSESSMENTS .1 Perform site specific health and safety hazard assessment of the Work and its site.
- .2 Carryout initial assessment prior to commencement of Work with further assessments as needed during progress of work, including when new trades and subcontractors arrive on site.

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- .3 Record results and address in Health and Safety Plan.
- .4 Keep documentation on site for entire duration of the Work.

1.11 PROJECT/SITE  
CONDITIONS

- .1 The following are known or potential project related safety hazards at site:
  - .1 Working in close proximity of water.
  - .2 Remote site location.
  - .3 Wet and slippery conditions.
  - .4 Inclement weather conditions.
  - .5 Heavy lifting.
  - .6 Working at heights.
  - .7 Cutting tools and other construction power tools.
  - .8 Hazardous materials.
  - .9 Sharp objects (construction debris).
  - .10 Steep terrain/cliffs/risk of falling
  - .11 Hazardous materials such as lead paint.
- .2 Above items shall not be construed as being complete and inclusive of potential health, and safety hazards encountered during work.
- .3 Include above items into hazard assessment process.

1.12 MEETINGS

- .1 Contractor to hold pre-construction health and safety meeting prior to commencement of Work. Ensure attendance of:
  - .1 Superintendent of Work.



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1.13 HEALTH AND  
SAFETY PLAN

- .2 Contractor's designated Health & Safety Site Representative.
- .3 Subcontractor's Health and Safety Site Representative.
- .4 Health and Safety Site Coordinator.
- .2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety regulations.
- .3 Keep documents on site.
- .1 Prior to commencement of Work, develop written Health and Safety Plan specific to the work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.
- .2 Health and Safety Plan shall include the following components:
  - .1 List of health risks and safety hazards identified by hazard assessment.
  - .2 Control measures used to mitigate risks and hazards identified.
  - .3 On-site Contingency and Emergency Response Plan as specified below.
  - .4 On-site Communication Plan as specified below.
  - .5 Name of Contractor's designated Health & Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
  - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.

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- .3 On-site Contingency and Emergency Response Plan shall include:
  - .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
  - .2 Evacuation Plan: site and floor plan layouts showing escape routes, marshaling areas. Details on alarm notification methods, fire drills, location of fire fighting equipment and other related data.
  - .3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.
  - .4 Emergency Contacts: name and telephone number of officials from:
    - .1 General Contractor and subcontractors.
    - .2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
    - .3 Local emergency resource organizations.
- .4 On-site Communication Plan:
  - .1 Procedures for sharing of work related safety information to workers and subcontractors, including emergency and evacuation measures.
- .5 Address all activities of the Work including those of subcontractors.
- .6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever new trade or subcontractor arrive at Work Site.

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- .7 Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.
- .8 Post copy of the Plan, and updates, prominently on Work Site.

1.14 SAFETY  
SUPERVISION

- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.
- .2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
  - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work
  - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
  - .3 Conduct site safety orientation session to persons granted access to Work Site.
  - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
  - .5 Stop the Work as deemed necessary for reasons of health and safety.
- .3 Health & Safety Site Representative must:
  - .1 Be qualified and competent person in occupational health and safety.
  - .2 Have site-related working experience specific to activities of the Work.

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- .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:
  - .1 Conduct regularly scheduled safety inspections of the Work on a minimum daily basis. Record deficiencies and remedial action taken.
  - .2 Conduct Formal Inspections on a minimum monthly basis. Use standardized safety inspection forms. Distribute to subcontractors.
  - .3 Follow-up and ensure corrective measures are taken.
- .6 Keep inspection reports and supervision related documentation on site.

1.15 TRAINING

- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and safety procedures and practices pertinent to their assigned task.
- .2 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
- .3 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and

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in writing.

- .4 All workers dealing with hazardous materials are required to provide evidence of training, in accordance with Provincial regulations.

1.16 MINIMUM  
SITE SAFETY RULES

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

1.17 CORRECTION OF  
NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues

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identified.

- .3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

1.18 INCIDENT  
REPORTING

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

1.19 HAZARDOUS  
PRODUCTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
- .2 Keep MSDS data sheets for all products delivered to site.
  - .1 Post on site.
  - .2 Submit copy to Departmental Representative.

1.20 SITE RECORDS

- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.

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- .2 Upon request, make available to  
Departmental Representative or authorized  
Safety Officer for inspection.

1.21 POSTING OF  
DOCUMENTS

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

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- 1.1 RELATED WORK .1 Section 02 41 16 - Sitework, Demolition and Removal.
- 1.2 DEFINITIONS .1 Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.
- 1.3 FIRES .1 No fires or burning is permitted on site.
- 1.4 DISPOSAL OF WASTES AND HAZARDOUS MATERIALS
- .1 Do not bury rubbish and waste materials on site.
- .2 Do not dispose of hazardous waste or volatile materials, such as mineral spirits, paints, thinners, oil or fuel into waterways, storm or sanitary sewers or waste landfill sites.
- .3 Store, handle and dispose of hazardous materials and hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
- .4 Dispose of construction waste materials and demolition debris, resulting from work, at approved landfill sites only. Carryout such disposal in strict accordance with provincial and municipal rules and regulations. Separate out and prevent improper disposal of items banned from landfills.
- .5 Establish methods and undertake construction



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practices which will minimize waste and optimize use of construction materials. Separate at source all construction waste materials, demolition debris and product packaging and delivery containers into various waste categories in order to maximize recycling abilities of various materials and avoid disposal of debris at landfill site(s) in a "mixed state". Where recycling firms, specializing in recycling of specific materials exist, transport such materials to the recycling facility and avoid disposal at landfill sites.

- .6 Communicate with landfill operator prior to commencement of work, to determine what specific construction, demolition and renovation waste materials have been banned from disposal at the landfill and at transfer stations.

1.5 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with governing regulations and requirements.
- .4 Pumped water must meet applicable federal, provincial, and municipal standards before it can be discharged to a surface water body.

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If regulatory guidelines exceedences are noted, the Departmental Representative has the right to issue stop pumping instructions to the Contractor. Contractor will not be compensated for any delays associated with retrofitting equipment to meet guidelines.

1.6 PERMITS

- .1 All guidelines and instructions stated on permits must be strictly adhered to.

1.7 WORK ADJACENT  
TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material.
- .3 Do not dump excavated fill, waste material or debris in waterways.
- .4 At borrow sites, design and construct temporary crossings to minimize erosion to waterways in strict conformance with provincial and federal environmental regulations.
- .5 Do not skid logs or construction materials across waterways.
- .6 Ensure refueling of any type of equipment does not, either directly or indirectly, create pollution by causing or permitting any leaks or spills.
- .7 Maintain equipment in good working condition with no fluid leaks, loose hoses or fittings.

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1.8 POLLUTION  
CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .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.
- .4 Have emergency spill response equipment and rapid clean-up kit, appropriate to work, at site. Locate adjacent to work and where hazardous materials are stored. Provide personal protective equipment as required for clean-up.
- .5 Report, to Federal and Provincial Department of the Environment, spills of petroleum and other hazardous materials as well as accidents having potential of polluting the environment. Also notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.

1.9 WILDLIFE  
PROTECTION

- .1 Should sea bird nests be encountered during work, immediately notify Departmental Representative for directives to be followed.
  - .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.
  - .2 Minimize work immediately adjacent to such areas until nesting is completed.

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- |  |    |   |
|--|----|---|
| <u>1.1 SANITARY FACILITIES</u>           | .1 | Provide sanitary facilities for work force in accordance with governing regulations and ordinances.   |
|  | .2 | Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.   |
| <u>1.2 WATER SUPPLY</u>                  | .1 | Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.   |
| <u>1.3 SCAFFOLDING</u>                   | .1 | Design, construct and maintain scaffolding in rigid, secure and safe manner in accordance with CSA797-09. Scaffolding drawings to be stamped by a professional engineer licenced by PEG-NL.   |
|  | .2 | Erect scaffolding independent of walls. Remove when no longer required.   |
| <u>1.4 CONSTRUCTION SIGN AND NOTICES</u> | .1 | Contractor or subcontractor advertisement signboards are not permitted on site.   |
|  | .2 | Only notices of safety or instructions are permitted on site.   |
|  | .3 | Safety and Instruction Signs and Notices:<br>.1 Signs and notices for safety and instruction shall be in both official languages.   |
|  | .4 | Maintenance and Disposal of Site Signs:<br>.1 Maintain approved signs and notices in good condition for duration of project and dispose of off site on completion of project or earlier if directed by Departmental Representative. |

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1.5 REMOVAL OF  
TEMPORARY  
FACILITIES

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

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PART 1 - GENERAL

1.1 SECTION  
INCLUDES

.1 Barriers.

1.2 INSTALLATION  
AND REMOVAL

.1 Provide temporary controls in order to  
execute work expeditiously.

.2 Remove from site all such work after use.

1.3 HOARDING

.1 Erect temporary site enclosure if required  
by governing authorities, using new 1.2 m  
high snow fence wired to rolled steel "T" bar  
fence posts spaced at 2.4 m centres. Provide  
one lockable truck gate. Maintain fence in  
good repair.

1.4 GUARD RAILS  
AND BARRICADES

.1 Provide secure, rigid guard rails and  
barricades around open excavations and as  
required to protect against falls. Note  
steep cliffs around work area and construct  
barricades where work is expected in these  
areas.

.2 Provide as required by governing authorities.

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PART 1 - GENERAL

1.1 GENERAL

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .3 Prevent accumulation of wastes which create hazardous conditions.
- .4 Provide adequate ventilation during use of volatile or noxious substances.

1.2 CLEANING DURING  
CONSTRUCTION

- .1 Maintain project grounds and public properties in a tidy condition, free from accumulations of waste material and debris. Clean areas on a daily basis.
- .2 Provide on-site garbage containers for collection of waste materials and debris.
- .3 Remove waste materials and debris from site on a daily basis.

1.3 FINAL CLEANING

- .1 In preparation for acceptance of the Work perform final cleaning. Contractor required to complete a "rake" cleaning of the footprint of each work area, ensuring all loose debris, wood chips, nails, remnants, etc. are removed to the satisfaction of the Departmental Representative.

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1.1 SECTION  
INCLUDES

- .1 Project Record Documents as follows:
  - .1 Approved shop drawings, including maintenance manuals where applicable.
  - .2 As-built drawings.

1.2 PROJECT RECORD  
DOCUMENTS

- .1 Departmental Representative will provide two white print sets of contract drawings and two copies of Specifications.
- .2 Maintain at site one set of the contract drawings and specifications to record actual "As-Built" site conditions.



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PART 1      GENERAL

1.1          REFERENCES

- .1 Codes and standards referenced in this section refer to the latest edition thereof.
- .2 Canadian General Standards Board (CGSB).
  - .1 CAN/CGSB-37.4, Fibrated, Cutback Asphalt, Lap Cement for Asphalt Roofing.
  - .2 CAN/CGSB-37.5, Cutback Asphalt Plastic Cement.
- .3 Canadian Roofing Contractors' Association (CRCA).
  - .1 CRCA Roofing Specification Manual.
- .4 Canadian Standards Association (CSA International).
  - .1 CAN/CSA-A123.1/A123.5, Asphalt Shingles Made From Organic Felt and Surfaced With Mineral Granules/Asphalt Shingles Made From Glass Felt and Surfaced With Mineral Granules.
  - .2 CSA A123.2, Asphalt-Coated Roofing Sheets.
  - .3 CAN/CSA-A123.3, Asphalt Saturated Organic Roofing Felt.
  - .4 CAN3-A123.51, Asphalt Shingle Application on Roof Slopes 1:3 and Greater.
  - .5 CAN3-A123.52, Asphalt Shingle Application on Roof Slopes 1:6 to Less Than 1:3.
  - .6 CSA B111, Wire Nails, Spikes and Staples.
- .5 National Research Council Canada (NRC)/Institute for Research in Construction (IRC) - Canadian Construction Materials Centre (CCMC).
  - .1 CCMC, Registry of Product Evaluations.

1.2          SAMPLES

- .1 Submit samples if directed by Departmental Representative.
- .2 Submit duplicate samples of full size specified shingles.

1.3          EXTRA MATERIALS

- .1 Provide 2 unopened bundles of shingles. Store as directed by Departmental Representative.

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1.4 SUBMITTALS

- .1 Submit product data as directed by Departmental Representative.
- .2 Manufacturer's Instructions: Provide to indicate special handling criteria, installation sequence, cleaning procedures.
- .3 Submit product data sheets for asphalt shingles. Include:
  - .1 Product characteristics.
  - .2 Performance criteria.
  - .3 Installation instructions.
  - .4 Limitations.
  - .5 Colour and finish.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Provide and maintain dry, off-ground weatherproof storage.
- .2 Remove only in quantities required for same day use.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Place materials defined as hazardous or toxic in designated containers.
- .2 Ensure emptied containers are sealed and stored safely for disposal away from children.
- .3 Use the least toxic sealants, and adhesives necessary to comply with requirements of this section.
- .4 Close and seal tightly. Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .5 Place used hazardous sealant tubes and adhesive containers in areas designated for hazardous materials.

1.7 WARRENTY

- .1 Shingles: 25 year manufacturer's warranty.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Asphalt shingles: to CSA A123.1/A123.5.
  - .1 Type: self-seal, standard, pattern rectangular.

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- .2 Mass: minimum 33 kg/3m<sup>2</sup>.
- .3 Colors: as selected by Departmental Representative.
- .2 Plastic Cement: to CAN/CGSB-37.5.

PART 3      EXECUTION

3.1            APPLICATION

- .1 Do asphalt shingle work in accordance with CAN3-A123.51 CAN3-A123.52, NBC/CRCA Specification, except where otherwise specified.
- .2 All work to be completed to approval of Departmental Representative. Intent is to re-attach existing shingles along eave of lightkeeper's dwelling and replace 4m<sup>2</sup> of shingles. New shingles to match existing colour and texture.

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PART 1      GENERAL

1.1            REFERENCES

- .1 Codes and Standards referenced in this section refer to the latest edition thereof.
- .2 American Society for Testing and Materials (ASTM)
  - .1 ASTM A653/A653M, Specification for Steel Sheet Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot Dip Process.
- .3 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-1.181, Ready-Mixed Organic Zinc-Rich Coating.
- .4 Canadian Standards Association (CSA International)
  - .1 G40.20/G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
  - .2 CSA W59, Welded Steel Construction (Metal Arc Welding).
- .5 Canadian Steel Door Manufacturers' Association, (CSDMA).
  - .1 CSDMA, Specifications for Commercial Steel Doors and Frames.
  - .2 CSDMA, Recommended Selection and Usage Guide for Commercial Steel Doors.
- .6 National Fire Protection Association (NFPA)
  - .1 NFPA 80, Standard for Fire Doors and Fire Windows.
  - .2 NFPA 252, Standard Methods of Fire Tests of Door Assemblies.
- .7 Underwriters' Laboratories of Canada (ULC)
  - .1 CAN4-S104M, Fire Tests of Door Assemblies.
  - .2 CAN4-S105M, Fire Door Frames Meeting the Performance Required by CAN4-S104.
- .8 CAN/ULC-S701, Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- .9 CAN/ULC-S702, Thermal Insulation, Mineral Fibre, for Buildings.

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1.2 DESIGN REQUIREMENTS

- .1 Design door assembly to withstand minimum 1,000,000 swing cycles in accordance with ANSI A151.1, with no failure of any design features of the door.
- .2 Design exterior frame assembly to accommodate expansion and contraction when subjected to minimum and maximum surface temperature of -35°C to +35°C.

1.3 SHOP DRAWINGS

- .1 Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, openings, glazed, louvers, arrangement of hardware and fire rating and finishes.
- .2 Indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings and reinforcing, fire-rating and finishes.
- .3 Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, handle and store doors and frames at the job site in such a manner as to prevent damage.
- .2 Store doors and frames under cover with doors stored in a vertical position on blocking, clear of floor and with blocking between doors to permit air circulation.

1.5 WARRANTY

- .1 Provide a written warranty for work of this section from manufacturer for failure due to defective materials for five (5) years.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Specifications for door and frame are included on the drawings.

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PART 3      EXECUTION

3.1            INSTALLATION GENERAL

- .1    Install doors and frames to CSDMA Installation Guide.

3.2            FRAME INSTALLATION

- .1    Set frames plumb, square, level and at correct elevation.
- .2    Secure anchorages and connections to adjacent construction.
- .3    Brace frames rigidly in position while building-in.
- .4    Seal around all frames with foam insulation.
- .5    Caulk perimeters of frames between frame and adjacent material.

3.3            DOOR INSTALLATION

- .1    Install doors and hardware in accordance with hardware templates and manufacturer's instructions.
- .2    Adjust operable parts for correct function.

3.4            FINISH REPAIRS

- .1    Touch up with primer finishes damaged during installation.
- .2    Fill exposed frame anchors and surfaces with imperfections with metallic paste filler and sand to a uniform smooth finish.

3.5            COMMISSIONING

- .1    Instruct maintenance personnel in operation and maintenance of doors and hardware.
- .2    Confirm operation and function for all doors and hardware.

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PART 1      GENERAL

1.1          REFERENCES

- .1 Codes and standards referenced in this section refer to the latest edition thereof.
- .2 Canadian Steel Door and Frame Manufacturers' Association (CSDFMA).
- .3 Canadian General Standards Board (CGSB).
  - .1 CAN/CGSB-69.17, Bored and Preassembled Locks and Latches.
  - .2 CAN/CGSB-69.18 /ANSI/BHMA A156.1, Butts and Hinges.
  - .3 CAN/CGSB-69.19/ANSI/BHMA A156.3, Exit Devices.
  - .4 CAN/CGSB-69.20/ANSI/BHMA A156.4, Door Controls (Closers).
  - .5 CAN/CGSB-69.21/ANSI/BHMA A156.5, Auxiliary Locks and Associated Products.
  - .6 CAN/CGSB-69.29/ANSI/BHMA A156.13, Mortise Locks and Latches.
  - .7 CAN/CGSB-69.31/ANSI/BHMA A156.15, Closer/Holder Release Device.
  - .8 CAN/CGSB-69.32-M90/ANSI/BHMA A156.16-1981, Auxiliary Hardware.
  - .9 CAN/CGSB-69.33/ANSI/BHMA A156.17, Self-Closing Hinges and Pivots.
  - .10 CAN/CGSB-69.34/ANSI/BHMA A156.18, Materials and Finishes.

1.2          SUBMITTALS

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature.
- .2 Hardware List:
  - .1 Submit contract hardware list.
  - .2 Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
- .3 Manufacturer's Instructions:

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.1 Submit manufacturer's installation instructions.

1.3 WARRANTY

- .1 Provide a written manufacturer's warranty for work of this Section for failure due to defective materials for five (5) years, dated from final completion certificate.

1.4 QUALITY ASSURANCE

Only recognized contract hardware distributors will be considered for the work of this section. The distributor shall have on staff a qualified Architectural Hardware Consultant recognized by the Door and Hardware Institute or a person with equivalent qualifications to assist installers and direct detailing, processing and delivery of material, and certify installation acceptance.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Store hardware in locked, clean and dry area.
- .2 Package each item of hardware, including fastenings, separately or in like groups of hardware; label each package as to item definition and location.

PART 2 PRODUCTS

2.1 HARDWARE ITEMS

- .1 Use one manufacturer's products only for similar items.

2.2 DOOR HARDWARE

- .1 As noted on the drawings.

2.3 FASTENINGS

- .1 Use only fasteners provided by manufacturer. Failure to comply may void warranties and applicable licensed labels.
- .2 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.



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- .3 Exposed fastening devices to match finish of hardware.
- .4 Use fasteners compatible with material through which they pass.

## 2.4 KEYING

- .1 Doors to be master keyed as directed. Prepare detailed keying schedule in conjunction with Departmental Representative.
- .2 Provide keys in triplicate for every lock in this Contract.
- .3 Provide three master keys.
- .4 Stamp keying code numbers on keys and cylinders.

## 2.5 FINISHES

- .1 Following finishes are indicated in hardware groups:

BHMA	CAN MATERIAL	FINISH
626	C26D Brass/Bronze	Satin Chrome
628	C28 Aluminum	Satin Alum, Anodized
630	C32D Stainless Steel	Satin Stainless Steel
652	C26D Steel	Plated Satin Chrome
689	Al All	Painted Aluminum
	Alum Aluminum	Mill Finish
	TMDFFF (to match door and frame finish)	

PART 3 EXECUTION

## 3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation

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instructions, product carton installation instructions, and data sheets.

- .2 Furnish metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.
- .3 Furnish manufacturers' instructions for proper installation of each hardware component.

3.2 INSTALLATION

- .1 Install hardware to standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.

3.3 EXAMINATION

- .1 Visit site prior to start of installation of hardware.
- .2 Visit will include examination of openings, site conditions and materials for conditions that prevent proper application of finish hardware.
- .3 Installation will imply conditions for installation acceptable; hardware contractor to accept responsibility.

3.4 ADJUSTING

- .1 Adjust door hardware, operators, closures and controls for optimum, smooth operating condition, safety and for weather tight closure.
- .2 Lubricate hardware, operating equipment and other moving parts.
- .3 Adjust door hardware to provide tight fit at contact points with frames.
- .4 Where hardware is found defective, repair or replace or correct as desired by inspection reports.

3.5 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.

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- .2 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacturer's instructions.
- .3 Remove protective material from hardware items.
- .4 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.6 PROTECTION

- .1 All hardware shall be protected against damage from paint, plaster or other defacing materials. Whenever possible, manufacturer's protective covering shall not be removed until final project cleaning takes place. Material not protected by manufacture shall be covered or removed from door during painting or any other adjustments that can cause damage to hardware.

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PART 1 - GENERAL

1.1 DESCRIPTION

- .1 This section specifies requirements for supply and installation of structural timber for new boardwalk, as follows:

.1 Supply and installation of treated dimension timber decking, beams, caps, posts and associated hardware.

1.2 REFERENCES

- .1 American Society for Testing and Materials (ASTM International)  
.1 ASTM A307-07b, Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile.
- .2 American Wood-Preserver's Association (AWPA)  
.1 AWPA M4-06, Standard for the Care of Preservation - Treated Wood Products.
- .3 Canadian Standards Association (CSA International)  
.1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.  
.2 CAN/CSA-G40.21-04, General Requirements for Rolled or Welded Structural Quality Steel/Structural Steel.  
.3 CAN/CSA G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.  
.4 CAN/CSA-O80 Series-97 (R2007), Wood Preservation.
- .4 Canadian Wood Council  
.1 Wood Design Manual.
- .5 National Lumber Grades Authority (NLGA)  
.1 Standard Grading Rules for Canadian Lumber 2000 edition.

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1.3 DIMENSIONS

- .1 Check existing site dimensions and report discrepancies to Departmental Representative before commencing work.

1.4 PROTECTION

- .1 Avoid dropping, bruising or breaking of wood fibres.
- .2 Avoid breaking surfaces of treated timber.
- .3 Do not damage surfaces of treated timber by boring holes or driving nails or spikes into them to support temporary material or staging.
- .4 Treat cuts, breaks or abrasions on surfaces of treated timber with 3 brush coats of preservative to CSA 080.
- .5 Treat bolt holes, cutoffs and field cuts in accordance with CSA 080.

1.5 DELIVERY  
AND STORAGE

- .1 Store timber horizontally, evenly supported and open piled permit circulation when stored for prolonged period.
- .2 When handling long timber, provide support at sufficient number of points, properly located to prevent damage due to excessive bending.
- .3 Handle treated timber with hemp, manila or sisal rope slings or other approved means of support that will not damage surface.
- .4 Do not use sharp pointed tools to handle treated timber. Any timber so handled will be rejected and be replaced at Contractor's expense.

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PART 2 - PRODUCTS

2.1 TIMBER  
MATERIALS

- .1 Timber: Use timber graded and stamped in accordance with applicable grading rules and standards of associations or agencies approved to grade lumber by Canadian Lumber Standards Administration Board of CSA.
- .2 Species
  - .1 Beams and caps: Hemlock or Douglas Fir (CCA or ACA treated).
  - .2 Decking: Hemlock (CCA or ACA treated).
  - .3 Posts: Red Pine, or approved equal.
- .3 Grade: No. 1 Structural Grade
- .4 Grading Authority: NLGA
- .5 Unnecessary field cutting will not be permitted.

2.2 MISCELLANEOUS  
STEEL AND  
FASTENINGS

- .1 Miscellaneous Steel: All steel and fastenings to be CSA G40.21, Grade 300 W, galvanized.
- .2 Nails and Spikes: to CSA B111.
- .3 Drift Bolts and lag screws: to G40.21 from round stock button head and diamond or wedge point. All drift bolts to be galvanized.
- .4 Galvanizing: will conform to CSA G164 "Hot Dip Galvanizing of Irregularly Shaped Articles." Unless otherwise specified, minimum weight of zinc coating will be as stated in Table 1 of this standard. Fabricator is to adhere to recommendations of Appendix A and Appendix B of standard.

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PART 3 - EXECUTION

3.1 PREPARATION

- .1 Install structural timbers to details shown on drawings or as specified.
- .2 Protect posts during driving and hold in position. If excavation is favoured in lieu of driving, backfill around posts after installation is complete.
- .3 Deck planks to be laid at right angles to deck beams. Deck planks to be in width specified and will cross structure in one lengths.