

SPECIFICATIONS

FOR

**SALT SHED UPGRADES
TERRA NOVAL NATIONAL PARK, NEWFOUNDLAND
Parks Canada**

ISSUED FOR TENDER

Parks Job No. PRO000462

Date: January 7, 2015

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PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 05 12 23- Structural Steel for Buildings
 - .2 Section 13 34 24- Fabricated Structures
- 1.2 Description of Work
- .1 The work will be carried out within the boundaries of the Terra Nova National Park (TNNP) at the TNNP Operations Compound - 1 Bay Salt Storage Shed. TNNP Operation Compound is located approximately 13 Km east of Glovertown, NL along the TCH. See Appendix A - Photos of Existing Salt Shed Foundation).
 - .2 Parks Canada will have a Departmental Representative, available to work collaboratively and jointly with the Contractor to determine field quantities.
 - .3 The work of this contract includes the provision of all materials, labour, equipment, and ancillaries, all as necessary for the completion of the work as indicated on the drawings and as described in the specifications and notes. Work on this project consists generally of, but not limited to, the following:
 - .1 Supply and install all necessary temporary supports, platforms, and bracing to complete work.
 - .2 The design, supply and installation of all labour, equipment, materials, and other plant necessary to construct the pre-Engineered Salt Storage Shed structure and enclosure on an existing concrete foundation as detailed on the drawings and specified herein. The work shall include but not limited to: design, supply and installing of the hot dipped galvanized steel trusses (see Appendix B for a sample truss illustration); building fabric covering roof and end-walls); membrane tubes; ventilation louvers, bird screens; flexible PVC door screen and hardware; galvanized bent plates; lumber; and all other materials and labour required to complete the work. Note: existing foundation designed to receive a '**Cover-All Building System TBS2**' (15.24m x 18.288m @6.096m o.c.) or approved equivalent. For list of approved structures see Fabrication Structures - Section 13 34 3. For foundation details see Appendix C - List of Drawing: A1, A2, A3, A4, A5, & A6.

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- 1.2 Description of Work (Cont'd)
- .3 All other labour, materials and work necessary to complete the project to the Departmental Representative's full satisfaction.
 - .4 All work to be carried out in accordance with applicable federal and provincial regulations for those agencies having jurisdiction for the work. The work is subject to the National Park Act and Regulations, Canadian Environmental Protection Act, Canada Labour Code and the provinces Occupational Health and Safety Act and Regulations.
 - .5 The Contractor is advised that other construction work may be being performed by others at several different locations during the time frame of this contract.
 - .6 Maintain work during construction. Undertake continuous and effective maintenance work day by day, with adequate equipment and forces so that the work is continuously kept in a condition satisfactory to Departmental Representative.
- 1.3 Familiarization with Site
- .1 Before submitting a bid, it is recommended that bidders visit the site to review and verify the form, nature and extent of the work, materials needed, the means of access and the temporary facilities required to perform the Work.
 - .2 Obtain prior permission from the Departmental Representative before carrying out such site inspection.
- 1.4 Codes and Standards
- .1 Perform work in accordance with the latest versions of the National Building Code of Canada and any other code of provincial or local application, including all amendments up to bid closing date, provided that in any case of conflict or discrepancy, the more stringent requirement shall apply.
 - .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

- 1.5 Interpretation of Documents .1 Supplementary to the Order of Precedence article of the General Conditions of the Contract, the Division 01 sections take precedence over the technical specification sections in other Divisions of the Specification Manual.
- 1.6 Term Engineer .1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Departmental Representative as defined in the General Conditions of the Contract.
- 1.7 Setting out of Work .1 Contractor to carry out all layout.
- .2 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .3 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.
- 1.8 Measurement for Payment .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment.
- 1.9 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.
- 1.10 Codes .1 Perform work in accordance with National Parks Act, Code of Practice of the Department of Labour, 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.
- .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.

- 1.10 Codes Cont'd
- .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.
- 1.11 Work Within Parks Boundaries
- .1 The project is within a National Park and it is essential that 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, the Contractor is responsible to 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 have repairs completed by others at the Contractor's expense.
 - .3 The Contractor shall ensure that contracted work meets the standards outlined in the contract specification and drawings.
- 1.12 Documents Required
- .1 Maintain at job site, one 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.
- 1.13 Site Conditions
- .1 The Contractor will be responsible to visit the site and review existing site conditions.

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| 1.14 Departmental Representative | .1 | Departmental Representative will be assigned after contract award. |
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| 1.15 Work Schedule | .1 | Provide to the Departmental Representative in writing and within 5 working days after Contract award, a detailed construction schedule. The schedule shall show proposed work to be undertaken and anticipated completion date. |
| | .2 | After receiving the Contractor's plan and prior to start of construction, a meeting involving 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, schedule of work, methods of construction, and environment protection methods. |
| | .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, and health and safety hazard assessment have both been approved. |
| | .5 | Following the pre-construction meeting and approval of the schedule, the work will be carried out to meet the time restraints and have the project completed on time. |
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| 1.16 Sanitary Services | .1 | The Contractor shall provide and maintain sanitary facilities for the use of workers at locations specified by the Departmental Representative. Provision of sanitary facilities shall meet requirements of provincial government and municipal statutes and authorities. |
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| 1.17 Contractors Use of Site | .1 | Use of site: for execution of work within those areas specified by the Departmental Representative. |
| | .2 | The Departmental Representative will specify the areas for work and storage. |

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| 1.18 Project Meeting | .1 | Contractor will arrange project meetings and assume responsibility for setting times and recording and distributing minutes. |
| 1.19 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. |
| 1.20 Existing Services | .1 | Carry out work at times directed by authorities having jurisdiction, with minimum of disturbance to Terra Nova National Park Maintenance Compound operations. |
| | .2 | Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings. |
| | .3 | Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing. |
| | .4 | Record locations of maintained, re-routed and abandoned services. |
| | .5 | Ensure pedestrian and other traffic is not unduly impeded, interrupted or endangered by execution or existence of work or plant. |
| | .6 | Verify locations of any utilities. |
| 1.21 Additional Drawings | .1 | Departmental Representative may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents. |
| 1.22 Relics, Antiques, and Wildlife Habitant | .1 | Protect relics, antiquities, wildlife habitat, items of historical or scientific interest such as cornerstones and contents, animal nesting sites, commemorative plaques, inscribed tablets, and similar objects found during course of work. |
| | .2 | Give immediate notice to Departmental Representative and await Departmental Representative's written instructions before proceeding with work in this area. |
| | .3 | Relics, antiquities and items of historical or scientific interest remain her Majesty's property. |

- 1.23 National Park Act .1 For projects within boundaries of National Park, perform work in accordance with National Parks Act.
- 1.24 Measurement of Quantities .1 Linear: Items which are measured by meter or kilometer unless otherwise shown on plans.
- .2 Area:
.1 Longitudinal and transverse measurements for areas to be measured horizontally.
- .3 Time:
.1 Unless otherwise provided for elsewhere or by written authority of Departmental Representative, hourly rental of equipment will be measured in actual working time and necessary travelling time of equipment within limits of project at an all-inclusive rate. Equip each unit of mobile equipment with an approved device to register hours of operation. Devices which only measure hours of running of motor will not be accepted.
- 1.24 Permits/
Authorities .1 The Contractor shall obtain, and pay for, permits from authorities as required for all operations and construction. He shall also comply with all pertinent regulations of all authorities having jurisdiction over the work. The Contractor shall provide copies of all permits to the Departmental Representative prior to starting the work. The Contractor shall be responsible for obtaining all applicable permits, inspections and approvals required and shall pay all changes in connection therewith.

PART 1 - GENERAL

- 1.1 Measurement .1 All measurement shall be along a horizontal plane unless otherwise indicated.
- 1.2 Pay Items .1 It is understood and agreed that in accordance with the General Conditions and subject to performance of the work to the entire satisfaction of the Project Authority, payment shall be made as follows:
- .1 A lump sum payment after satisfactory completion of all the work covered by the contract including submission of the final report and an invoice and approval by the Project Authority.
 - .2 All and any items not specifically included in the Measurement for Payment are considered incidental to the work and are to be included in the lump sum payment of the work.

PART 2 - PRODUCTS

- 2.1 Not Used .1 Not used.

PART 3 - EXECUTION

- 3.1 Not Used .1 Not used.

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 35 29.06 - Health and Safety Requirements.
 - .2 Section 01 35 43 - Environmental Procedures.
- 1.2 References
- .1 Canadian Construction Documents Committee (CCDC).
- 1.3 Administrative
- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
 - .2 Do not proceed with Work affected by submittal until review is complete.
 - .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
 - .4 Where items or information is not produced in SI Metric units converted values are acceptable.
 - .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
 - .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
 - .7 Verify field measurements and affected adjacent Work are coordinated.
 - .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.

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- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .10 Keep one reviewed copy of each submission on site.
- 1.4 Shop Drawings and Product Data
- .1 Canadian Construction Documents Committee (CCDC).
- .2 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.
- .3 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in Province of Newfoundland and Labrador, Canada.
- .4 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .5 Allow 5 days for Departmental Representative to review each submission.
- .6 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.
- .7 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.
- .8 Accompany submissions with transmittal letter, in duplicate, containing:
- .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.

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- .9 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.
 - .10 After Departmental Representative's review, distribute copies.
 - .11 Submit two (2) print and one (1) electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
 - .12 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
 - .13 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accordance with specified requirements.
 - .2 Testing must have been within 3 years of date of contract award for project.
 - .14 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.

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- .2 Certificates must be dated after award of project contract complete with project name.
 - .15 Submit electronic copies of manufacturer's instructions for requirements requested in specification Sections and as requested 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.
 - .16 Submit electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested 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.
 - .17 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
 - .18 Delete information not applicable to project.
 - .19 Supplement standard information to provide details applicable to project.
 - .20 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, transparency 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.
 - .21 The review of shop drawings by the Departmental Representative is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that Departmental Representative approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.

- .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

1.5 Samples

- .1 Submit for review samples in triplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative business address.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples 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 samples which Departmental Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.6 Certificates
and Transcripts

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

Parks Canada
Terra Nova National Park
Salt Shed Upgrades
Project No. PRO000462

Submittal Procedures

Section 01 33 00

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December 2014

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

- 1.1 Submittals .1 Submit to Departmental Representative copies of the following documents, including updates:
- .1 Site Specific Health and Safety Plan.
 - .2 Name and qualifications of person to be retained full time as H&S Coordinator.
- 1.2 Compliance Requirements
- .1 Comply with the Occupational Health and Safety Act for the Province of Newfoundland and Labrador, and the Occupational Health and Safety Act 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 National Building Code of Canada;
 - .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
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 health and safety of persons on site, of property and for protection of persons and public circulating adjacent to work operations to extent that they may be affected by conduct of the Work.
 - .2 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 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 to construction areas.
 - .1 Delineate and isolate construction areas from other areas of site Facility by use of appropriate means.
 - .2 Post notices and signage at entry points and at other strategic locations identifying entrance onto site to be restricted to authorized persons only.
 - .3 Signage must be professionally made, bilingual in both official languages or display internationally understood graphic symbols.
 - .2 Approve and grant access to site only to workers and authorized persons.
 - .1 Immediately stop non-authorized persons from circulating in construction areas and remove from site.
 - .2 Provide site safety orientation to all persons before granting access. Advise of site conditions, hazards and mandatory safety rules to be observed on site.
 - .3 Secure site at night time to extent required to protect against unauthorized entry.
 - .4 Ensure persons granted access to site wear appropriate personal protective equipment (PPE) suitable to work and site conditions.
 - .1 Provide such PPE to authorized persons who require access to perform inspections or other approved purposes.
- 1.5 Protection
- .1 Carry out work placing emphasis on health and safety of the Public, Facility personnel, construction workers and protection of the environment.
 - .2 Erect safety barricades and signage on site to effectively delineate work areas, protect pedestrian and vehicular traffic around and adjacent to work and to create a safe working environment.
 - .3 Should unforeseen or peculiar safety related hazard or condition become evident during performance of work, immediately take measures to rectify the situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

- 1.6 Filing Of Notice .1 File Notice of Project and other Notices with Provincial authorities prior to commencement of Work.
- 1.7 Permits .1 Post on site permits, licenses, compliance certificates specified in section 01 10 10.
- .2 Where particular permit or compliance certificate cannot be obtained at the required stage of work, notify Departmental Representative in writing and obtain his/her approval to proceed before carrying out that portion of work.
- 1.8 Hazard Assessments .1 Conduct site specific health and safety hazard assessment before commencing project and during course of the work. Identify risks and hazards resulting from site conditions, weather conditions and work operations.
- .1 Also, conduct assessment when the scope of work has been changed by Change Order and when potential hazard or weakness in current health and safety practices are identified by Departmental Representative or by an authorized safety Representative.
- .2 Record results in writing and address in Health and Safety Plan.
- .3 Keep copy of all assessments on site.
- 1.9 Project/Site Condition .1 The following are known or potential project related health, environmental and safety hazards at site which must be properly managed if encountered during course of work:
- .1 Existing hazardous products are:
- .1 work within and adjacent to roadway .
- .2 work adjacent to streams and water
- .2 Above list shall not be construed as being complete and inclusive of potential health, and safety hazards encountered during work. Include above items into hazard assessment process.
- .3 Obtain from Departmental Representative, copy of MSDS Data sheets for existing hazardous products stored on site or used by Facility personnel.

- 1.10 Health And Safety Meetings .1 Attend pre-construction health and safety meeting conducted by Departmental Representative. Have following persons in attendance:
- .1 Site Superintendent.
 - .2 Contractor's designated Health and Safety Site Supervisor.
 - .3 Health & Safety Site Coordinator.
 - .4 Departmental Representative will advise of date, time and location.
- 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.
- .1 Submit copy to Departmental Representative within 5 calendar days of acceptance of bid.
 - .2 Submit updates as work progresses.
- .2 Health and Safety Plan shall contain three (3) parts with following information:
- .1 Part 1 - Hazards: List of individual health risks and safety hazards identified by hazard assessment process.
 - .2 Part 2 - Safety Measures: engineering controls, personal protective equipment and safe work practices used to mitigate hazards and risks listed in Part 1 of Plan.
 - .3 Part 3a: Emergency Response: standard operating procedures, evacuation measures and emergency response in the occurrence of an accident, incident or emergency.
 - .1 Include response to all hazards listed in Part 1 of Plan.
 - .2 Evacuation measures to complement the Facility's existing Emergency Response and Evacuation Plan. Obtain pertinent information from Departmental Representative.
 - .3 List names and telephone numbers of officials to contact including:
 - .1 General Contractor and all Subcontractors.
 - .2 Federal and Provincial Departments as stipulated by laws and regulations and local emergency resource organizations, as needed based on nature of emergency or accident.
 - .3 Officials from PWGSC and site Facility management. Departmental Representative will provide list.

- .3 Part 3b - Site Communications:
- .1 Procedures used on site to share work related safety issues between workers, subcontractors, and General Contractor.
 - .2 List of critical tasks and work activities, to be communicated with the Facility Manager, which has risk of affecting tenant operations, or endangering health and safety of Facility personnel and the general public. Develop list in consultation with the Departmental Representative.
- .4 Prepare Health and Safety Plan in a three column format, addressing the three parts specified above, as follows:
- | Column 1 | Column 2 | Column 3 |
|--------------------|-----------------|--|
| Part 1 | Part 2 | Part 3a/3b |
| Identified Hazards | Safety Measures | Emergency Response & Site Communications |
- .5 Develop Plan in collaboration with subcontractors. Address work activities of all trades. Revise and update Plan as Sub-contractors arrive on site.
- .6 Implement and enforce compliance with requirements of Plan for full duration of work to final completion and demobilization from site.
- .7 As work progresses, review and update Plan. Address additional health risks and safety hazards identified by on-going hazard assessments.
- .8 Post copy of Plan, and updates, on site.
- .9 Submission of the Health and Safety Plan, and updates, to the Departmental Representative is for review and information purposes only. Departmental Representative's receipt, review and any comments made of the Plan shall not be construed to imply approval in part or in whole of such Plan by Departmental Representative and shall not be interpreted as a warranty of being complete and accurate or as a confirmation that all health and safety requirements of the Work have been addressed and that it is legislative compliant. Furthermore, Departmental Representative's review of the Plan shall not relieve the Contractor of any of his legal obligations for Occupational Health and Safety provisions specified

as part of the Work and those required by provincial legislation.

- 1.12 Safety Supervision and Inspections
- .1 Designate one person to be present on site at all times, responsible for supervising health and safety of the Work.
 - .1 Person to be competent in Occupational Health and Construction Safety as defined in the Provincial Occupational Health and Safety Act.
 - .2 Assign responsibility, obligation and authority to such designated person to stop work as deemed necessary for reasons of health and safety.
 - .3 Conduct regularly scheduled informal safety inspections of work site on a minimum bi-weekly basis.
 - .1 Note deficiencies and remedial action taken in a log book or diary.
 - .4 Keep inspection reports on site.
- 1.13 Training
- .1 Ensure that all workers and other persons granted access to site are competently trained and knowledgeable on:
 - .1 Safe use of tools and equipment.
 - .2 How to wear and use personal protective equipment (PPE).
 - .3 Safe work practices and procedures to be followed in carrying out work.
 - .4 Site conditions and minimum safety rules to be observed on site, as given at site orientation session.
- 1.14 Minimum 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 to be obeyed by all persons granted site 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.
 - .2 Immediately report unsafe activity or condition at site, near-miss accident, injury and damage.
 - .3 Maintain site in tidy condition.
 - .4 Obey warning signs and safety tags.
 - .2 Brief workers on site safety rules and on disciplinary measures to be taken by Departmental Representative for violation or non compliance of such rules. Post rules on site.

- .3 The following actions or conduct by Contractor, workers and subcontractors will be considered as non conformance with the health and safety requirements of the contract for which a Non-Compliance Notification will be issued to the General Contractor by the Departmental Representative;
 - .1 Failure to follow the minimum site safety rules specified above.
 - .2 Negligence resulting in serious injury or major property damage.
 - .3 Deliberate non-compliance with Federal and Provincial Acts and Regulations.
 - .4 Falsification of information in Workers Compensation Reports, safety reports and other health and safety related documents submitted to Departmental Representative or to Authority having jurisdiction.
 - .5 Possession of firearms on site.
 - .6 Possession of non-prescriptive illegal drugs or alcohol.
 - .7 Action, or lack thereof, resulting in the issuance of Warnings, Fines or Stop Work Orders from a Provincial Authority having jurisdiction.
 - .8 Violation of other specified health and safety rules and requirements as determined by Departmental Representative.
 - .4 See elsewhere in this section for details on Non-Compliance Notifications and resulting disciplinary measures.
- 1.15 Accident Reporting
- .1 Investigate and report the following incidents and accidents:
 - .1 Those as required by Provincial Occupational Health and Safety Act and Regulations.
 - .2 Injury requiring medical aid as defined in the Canadian Dictionary of Safety Terms-1987, published by 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.
 - .2 Property damage in excess of \$5000.00,
 - .3 Interruption to Facility operations with potential loss to a Federal Dept. in excess of \$5000.00,
 - .4 Those which require notification to Workers Compensation Board or other regulatory agencies as stipulated by

applicable law or regulations.

- .2 Send written report to Departmental Representative for all above cases.
- 1.16 Tools and Equipment Safety
 - .1 Routinely check and maintain tools, equipment and machinery for safe operation.
 - .2 Conduct checks as part of site safety inspections. When requested, submit proof that checks and maintenance have been carried out.
 - .3 Tag and immediately remove from site items found faulty or defective.
- 1.17 Hazardous Products
 - .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
 - .2 Keep MSDS data sheets for all products delivered to site. Post on site. Submit copy to Departmental Representative upon receipt.
- 1.18 Confined Spaces
 - .1 Carry out work in confined spaces in compliance with:
 - .1 Provincial Occupational Health and Safety Regulations and;
 - .2 Canada Occupational Safety and Health Regulations (COSH) made under the Canada Labour Code - Part II.
 - .2 Conduct hazard assessment and address in Safety Plan before entering confined space.
- 1.19 Posting of Documents
 - .1 Post on site safety documentation as stipulated by Authorities having jurisdiction and as specified herein. Place in a common visible location.
- 1.20 Site Records
 - .1 Maintain on site a copy of all health and safety documentation and reports specified to be produced as part of the work and received from authorities having jurisdiction.
 - .2 Upon request, make available to Departmental

Representative and to other authorized safety representative for review. Provide copy when directed by Departmental Representative.

1.21 Non Compliance
and Disciplinary
Measures

- .1 Immediately address and correct health and safety violations and non-compliance issues.
- .2 Negligence or failure to follow occupational health and safety provisions specified in the Contract Documents and of those of applicable federal and provincial laws and regulations could result in disciplinary measures taken by the Departmental Representative against the General Contractor.
- .3 PWGSC uses a system of Non-Compliance Notifications and Disciplinary Measures on projects as follows:
 - .1 A non-compliance notification will be issued to the General Contractor, by the Departmental Representative, whenever there is a violation or failure to follow any of the project's occupational health and safety requirements by a worker, subcontractor or any other person to whom the Contractor has granted access to the work site.
 - .2 Non-Compliance notifications are progressive in nature resulting in increased disciplinary measures imposed depending on the frequency, nature and severity of the infraction.
 - .3 Disciplinary measures could include:
 - .1 Removal of the offending person or party from site;
 - .2 Financial penalties in the form of progress payment reduction or holdback assessments made against the Contract and;
 - .3 Taking the Work Out of Contractor's Hands in accordance with the General Conditions.
- .4 Departmental Representative will make final decision as to what constitutes a violation and when to issue a Non-Compliance Notification.
- .5 Non-compliance Notifications issued by Departmental Representative shall not be construed as to overrule or disregard warnings, orders and fines levied against Contractor by a regulatory agency having jurisdiction.
- .6 Details of the Non-Compliance Notification and Disciplinary Measures system will be provided by Departmental Representative upon acceptance of bid and prior to commencement of work.
- .7 Further details on the disciplinary system will be provided at the pre-construction Health and Safety

meeting.

- .8 Be responsible to fully brief workers and subcontractors on the operation and importance of this system.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Related Sections .1 Section 01 74 21 - Constructional Demolition Management and Disposal.
- 1.3 Fires .1 Fires and burning of rubbish on site not permitted.
- 1.4 Disposal of Wastes .1 Do not bury rubbish and waste materials on site unless approved by Departmental Representative.
.2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
.3 Dispose of uncontaminated construction/demolition material which cannot be recycled or reused, at an approved construction and debris disposal site.
- 1.4 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 local authority requirements.
- 1.5 Site Clearing and Plant Protection .1 Protect trees and plants on site and adjacent properties where indicated.
.2 Wrap in burlap, trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.
.3 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.

- .4 Minimize stripping of topsoil and vegetation.
- .5 Restrict tree removal to areas indicated or designated by Departmental Representative.

1.6 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 Prevent sandblasting and other extraneous materials from contaminating air 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. Chemicals used in dust control must have prior approval of the Departmental Representative.

1.7 General
Requirements

- .1 Work under this contract is to be carried out in a National Park, and environmental protection must be given a high priority by all staff involved with the work.
- .2 An Environmental Briefing will be held prior to work commencing at the site, which will outline environmental factors to be considered during the work. It is mandatory that all current staff of the Contractor attend this meeting with the Departmental Representative and Environmental Protection Officer (EPO).
- .3 Mitigation requirements are outlined in the Environmental Screening Document appended to the Specifications. This document is not all-inclusive, and site adjustment of the mitigation methods for the work may be required. The Departmental Representative will advise the Contractor of any additional requirements as they arise.

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- 1.9 Site Set-up and Use
- .1 All site activities related to construction are to be confined within the defined project boundaries.
 - .2 Work sites will be equipped with appropriate and properly maintained sanitary facilities.
 - .3 Garbage must be collected and removed daily from the work site. All material must be removed, transported and disposed of in accordance with existing provincial - municipal and Park solid waste disposal guidelines and/or regulations.
 - .4 Littering is prohibited.
 - .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.
- 1.10 Environmental Performance
- .1 The Contractor is required to follow the Canadian Environmental Protection Act.
 - .2 The Contractor is held responsible to ensure that all necessary permits related to Environmental Protection have been obtained and that necessary documentation is available on-site.
- 1.11 Vehicular Movements
- .1 Restrict movement of vehicles and equipment to existing disturbed areas (access roads, borrow pits, disposal areas and right-of-ways).
- 1.12 Storage and Handling of Fuels and Dangerous Fluids
- .1 Fueling of vehicles or equipment will not be permitted within 100 m of any water body. Maintenance of vehicles and equipment will be permitted only in designated areas as directed by the Departmental Representative.
 - .2 Exercise care in handling of fuels or dangerous materials to minimize potential for spills. Report immediately any spills to Departmental Representative. Contractor is responsible for responding immediately to any spill to minimize environmental damage and for clean-up, repair or rehabilitation resulting from any spills to the satisfaction of the Departmental Representative.

- .3 Supply and maintain on site emergency response material to contain spills and minimize environmental damage, i.e. absorbent material, to the approval of Departmental Representative. Disposal of all contaminated material as per Clause 3 of this section.
- .4 Dangerous goods, whose release into the environment could cause adverse effect, should be stored and handled in a manner which gives due regard for workers and public safety, and for the protection of the environment.
- .5 No material toxic to fish or any aquatic life shall be permitted to enter any stream, river, or lake. This shall include, but not be limited to lubricants, fuels, testing fluids, insecticides, detergents, herbicides, cement, lime or concrete.
- .6 The management of fuels, lubricants and chemicals must meet with the requirements of the Newfoundland & Labrador Department of Environment & Conservation and all other appropriate provincial and federal regulations.
- .7 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.
- .8 All refueling and lubricating operations should employ protection measures such as drip pans, to reduce the potential for escape of petroleum products to the environment.
- .9 The Departmental Representative and the Park Warden must be immediately contacted after a spill of fuel or lubricant, and after any amount of other chemical products has escaped.
- .10 Storage of any fuel has to occur only in previously approved locations, and with Park consent. The Contractor must submit plans for fuel management and a Spill Contingency Plan seven days prior to the start of the Work. The Contractor is expected to be prepared to effect the containment and cleanup of all spills related to the Work.
- .11 Storage of hazardous material shall not be permitted, except for quantities which shall normally be expected to be utilized in a day of Work, and which are not permitted to stockpile.

- 1.13 Relics and Antiquities
- .1 Relics and antiquities and items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found on site or in structures to be demolished, shall remain property of Canada. Protect such articles and request direction from Departmental Representative.
 - .2 Give immediate notice to Departmental Representative if evidence of archaeological finds are encountered during construction and await his written instructions before proceeding with work in this area.
- 1.14 Treated Wood
- .1 Workers shall 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.
 - .2 Disposal of treated wood wastes including saw-dust must be outside of the site, and in accordance with all applicable Provincial and Municipal regulations. Similar attention must be given to disposal of any replaced guiderail posts which have been treated with creosote.
- 1.15 Environmental Incident or Emergency
- .1 In the event of an environmental incident or emergency such as:
 - .1 Chemical spill or petroleum spill;
 - .2 Poisonous or caustic gas emission;
 - .3 Hazardous material spill;
 - .4 Sewage spill;
 - .5 Contaminated water into waterways.
 - .2 The Contractor or his employees shall:
 - .1 Notify the Contractor's job superintendent.
 - .2 Call the local emergency services and give type of emergency.
 - .3 The Contractor is to submit to Departmental Representative a copy of its Environmental/Spill Response Plan for approval.
- 1.16 Site Decommissioning
- .1 Unless prior permission from the Departmental Representative is obtained, all contractor 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 circumstances, upon the suspension of work activities.

.2 All work sites must be returned to a neat and tidy condition upon site abandonment.

1.17 Site Clearing

.1 Vegetation should not be cleared unless approved by Departmental Representative.

.2 Vegetation and topsoil should not be removed to obtain fill for road construction purposes.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Used.

PART 1 - GENERAL

1.1 Refueling

- .1 Refueling of equipment to be performed in locations as directed by Departmental Representative.
- .2 Do not refuel equipment within 100 metres of any watercourse or storm water catch basin unless protection against spills is in place and location is approved by Departmental Representative.
- .3 Use petroleum containers approved for products with no spill fill spouts for dispensing fuels. The sure pour nozzle to have self-closing valve, prevent any flow of fuel until the nozzle is inserted into the receiving container. On removal from the receiving container the slide valve closes to eliminate any fuel spill. Nozzle to be equipped with its own automatic vent eliminating the need for the user to open or close air inlets on the pouring container.
- .4 Nozzle to support the weight of the pouring container. Nozzles to automatically stop the flow when the receiving container becomes full. The nozzle to be such that it reduces evaporative losses of volatile organic compounds during the fuel transfer.
- .5 All spills of hydrocarbon based products such as gasoline, kerosene, naphtha, lubricating oils, engine oils, greases and de-icing fluids or antifreeze **no matter how large or small to be reported to Departmental Representative.**
- .6 Oil changes or equipment repairs in the field or on Parks Canada land are not permitted.
- .7 Refueling to be performed on level surfaces, PCC Portland cement concrete or HMA surfaces when approved by the Departmental Representative unless otherwise directed.
- .8 Contractor to have drip pans sized for amounts of product to be recovered and customized to fit under pieces of equipment to perform routine maintenance to equipment while maintaining equipment on property. Drip Pans to be used whenever leaving equipment on site or parking overnight when not in use.
- .9 Parking of equipment on site to be on level ground in locations away from watercourses and as approved by Departmental Representative. Equipment with leaks or poor mechanical repair to be removed from site when so ordered by Departmental Representative.

1.2 Spill Control
Kit

- .1 Contractor to have at the work site a spill control kit consisting of the following minimum types of equipment:
 - .1 a spaded shovel;
 - .2 a stable broom;
 - .3 a broad nosed shovel;
 - .4 a container(s) suitable, compatible to and of sufficient size to contain petroleum products being used with equipment;
 - .5 Absorbents;
 - .6 rags;
 - .7 metal container for soiled rags;
 - .8 Booms when working next to a watercourse that will traverse the width of the watercourse by two times; and
 - .9 Spill control kit to be inspected and approved by both the Department of Environment & Conservation and the Departmental Representative prior to Work commencing. Spill control kits to be available to Contractor employees at all areas where Work of the Contract is being performed and at all times during the course of the Contract.
 - .10 Contractor employees to be trained in the use of the spill control kit and the equipment they contain.

1.3 Spills

- .1 Disposal of spilled materials to be off Parks Canada property and at approved locations for materials to be disposed of.
- .2 When parking of equipment on site, the equipment is to be secured from entry, inspected for leaks and the ground protected from leaks.
- .3 Contractor to protect all wells, catch basins, drywells, drains and watercourses from contamination in event of a spill.
- .4 All equipment to be used for the Work of the Contract to be inspected by the Departmental Representative for leaks. Equipment not in good repair to be removed/repaired when directed by Departmental Representative.
- .5 Spills in excess of 74 liters to be reported immediately to Departmental Representative and the Newfoundland and Labrador Department of Environment and Conservation.
- .6 Contractor to immediately remove as much or all of the contaminated soils as possible, from any spills created from Work of the Contractor.

- .7 Contaminated soils/materials to be placed in containers compatible to the contaminants.
- .8 Any remaining clean-up to be performed at no extra cost to Parks Canada. Clean-ups to be to the Departmental Representative's satisfaction.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not used.

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 01 33 00 Submittal Procedures
- 1.2 Inspection .1 Give timely notice requesting inspection of Work designated for special tests, inspections or approvals by Departmental Representative or by inspection authorities having jurisdiction.
- .2 In accordance with the General Conditions, Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.
- .3 If Contractor covers or permits to be covered Work designated for special tests, inspections or approvals before such is made, uncover Work until particular inspections or tests have been fully and satisfactorily completed and until such time as Departmental Representative gives permission to proceed.
- .4 Pay costs to uncover and make good work disturbed by inspections and tests.
- 1.3 Testing .1 Tests on materials, as specified in various sections of the Specifications is the responsibility of the Department except where stipulated otherwise.
- 1.5 Access to Work .1 Facilitate Departmental Representative's access to Work. If part of Work is being fabricated at locations other than construction site, make preparations to allow access to such Work whenever it is in progress.
- .2 Furnish labour and facility to provide access to the work being inspected and tested.
- .3 Co-operate to facilitate such inspections and tests.
- 1.6 Rejected Work .1 Remove and replace defective Work, whether result of poor workmanship, use of defective or damaged products and whether incorporated in Work or not, which has been identified by Departmental Representative as failing to conform to Contract Documents.
- .2 Make good damages to new construction and finishes resulting from removal or replacement of defective work.

Parks Canada
Terra Nova National Park
Salt Shed Upgrades
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Quality Control

Section 01 45 00

Page 2

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PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 References .1 Canadian General Standards Board (CGSB)
.1 CGSB 1.189M-84, Primer, Alkyd, Wood, Exterior.
.2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
.2 Canadian Standards Association (CSA International)
.1 CSA-O121-M1978, Douglas Fir Plywood.
- 1.4 Installation and Removal .1 Provide temporary controls in order to execute Work expeditiously.
.2 Remove from site all such work after use.
- 1.5 Guard Rails and Barricades .1 Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stair wells, open edges of floors and roofs.
.2 Provide as required by governing authorities.
- 1.6 Access to Site .1 Provide and maintain access roads, as may be required for access to Work.
- 1.7 Fire Routes .1 Maintain access to property including overhead clearances for use by emergency response vehicles.
- 1.9 Protection for Off-Site and Public Property .1 Protect surrounding private and public property from damage during performance of Work.
.2 Be responsible for damage incurred.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Reference Standards .1 Within text of each specifications section, reference may be made to reference standards.
- .2 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .3 If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .4 Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .5 Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.
- 1.3 Quality .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like

item throughout building.

- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.4 Availability

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

1.5 Storage, Handling and Protection

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

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- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.
- 1.6 Transportation
- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Owner. Unload, handle and store such products.
- 1.7 Manufacturer's Instructions
- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.
- 1.8 Quality of Work
- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

- 1.9 Co-Ordination
- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
 - .2 Be responsible for coordination and placement of openings, sleeves and accessories.
- 1.10 Remedial Work
- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
 - .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.
- 1.11 Existing Utilities
- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants and pedestrian and vehicular traffic.
 - .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

PART 2 - PRODUCTS

- 2.1 NOT USED
- .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED
- .1 Not Used.

PART 1 - GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Related Section .1 Section 01 77 00 - Closeout Procedures.
- 1.3 Project Cleanliness .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Owner or other Contractors.
- .2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .3 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4 Provide on-site containers for collection of waste materials and debris.
- .5 Provide and use clearly marked separate bins for recycling.
- .6 Remove waste material and debris from site and deposit in waste container at end of each working day.
- .7 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .8 Dispose of waste materials, and debris off site at approved facilities.
- 1.4 Final Cleaning .1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.

- .5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .6 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .7 Remove dirt and other disfiguration from exterior surfaces.
- .8 Sweep and wash clean paved areas.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Used.

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 01 33 00 - Submittal Procedures.
- 1.2 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.3 Definitions .1 Materials Source Separation Program (MSSP): Consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
- .2 Recyclable: Ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse by others.
- .3 Recycle: Process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .4 Recycling: Process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- .5 Reuse: Repeated use of product in same form but not necessarily for same purpose. Reuse includes:
- .1 Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, re-use on current project or for storage for use on future projects.
- .2 Returning reusable items including pallets or unused products to vendors.
- .6 Salvage: Removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
- .7 Separate Condition: Refers to waste sorted into individual types.
- .8 Source Separation: Acts of keeping different types of waste materials separate beginning from first time they became waste.

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| 1.4 Documents | .1 | Maintain at job site, one copy of following documents:
.1 Material Source Separation Plan. |
| 1.5 Submittals | .1 | Submittals in accordance with Section 01 33 00 -
Submittal Procedures. |
| | .2 | Prepare and submit following prior to project start-up:
.1 Submit 2 copies of Materials Source Separation
Program (MSSP) description. |
| 1.6 Waste Reduction
Workplan (WRW) | .1 | Prepare, Waste Reduction Work plan. |
| | .2 | Structure WRW to prioritize actions and follow as first
priority Reuse, then followed by Recycle. |
| | .3 | Describe management of waste. |
| | .4 | Post work plan or summary where workers at site are
able to review its content. |
| 1.7 Materials
Source Separation
Program (MSSP) | .1 | Prepare MSSP and have ready for use prior to project
start-up. The Demolition Waste Audit (DWA), with
related weight bills and/or receipt must be submitted
on a monthly basis with the Contractor's monthly
Progress claim. |
| | .2 | Implement MSSP for waste generated on project in
compliance with approved methods and as reviewed by
Departmental Representative. |
| | .3 | Provide on-site facilities for collection, handling,
and storage of anticipated quantities of reusable and
recyclable materials. |
| | .4 | Provide containers to deposit reusable and recyclable
materials. |
| | .5 | Locate containers in locations, to facilitate deposit
of materials without hindering daily operations. |
| | .6 | Locate separated materials in areas which minimize
material damage. |
| | .7 | Collect, handle, store on-site, and transport
off-site, salvaged materials in separated condition.
.1 Transport to approved and authorized recycling
facility. |

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- 1.8 Storage, Handling and Protection
- .1 Store, materials to be reused, recycled and salvaged in locations as specified in MSSP.
 - .2 Unless specified otherwise, materials for removal become Contractor's property.
 - .3 Protect, stockpile, store and catalogue salvaged items.
 - .4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
 - .5 Protect structural components not removed for demolition from movement or damage.
 - .6 Support affected structures. If safety of building is endangered, cease operations and immediately notify Departmental Representative.
 - .7 Protect surface drainage, mechanical and electrical from damage and blockage.
 - .8 Separate and store materials produced during dismantling of structures in designated areas.
 - .9 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities.
 - .1 On-site source separation is recommended.
 - .2 Remove co-mingled materials to off-site processing facility for separation.
 - .3 Provide waybills for separated materials.
- 1.9 Disposal of Wastes
- .1 Do not bury rubbish or waste materials.
 - .2 Do not dispose of waste, volatile materials, mineral spirits, oil or paint thinner into waterways, storm, or sanitary sewers.
 - .3 Keep records of construction waste including:
 - .1 Number and size of bins.
 - .2 Waste type of each bin.
 - .3 Total tonnage generated.
 - .4 Tonnage reused or recycled.
 - .5 Reused or recycled waste destination.
 - .4 Remove materials from deconstruction as deconstruction/disassembly Work progresses.
 - .5 Prepare project summary to verify destination and quantities on a material-by-material basis as identified in pre-demolition material audit.

1.10 Use of Site and Facilities .1 Execute work with least possible interference or disturbance to normal use of premises.
.2 Maintain security measures established by PWGSC.

1.11 Scheduling .1 Coordinate Work with other activities at site to ensure timely and orderly progress of Work.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 Application .1 Do Work in compliance with WRW.
.2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

3.2 Cleaning .1 Remove tools and waste materials on completion of Work, and leave work area in clean and orderly condition.
.2 Clean-up work area as work progresses.
.3 Source separate materials to be reused/recycled into specified sort areas.

PART 1 - GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Related Sections .1 Section 01 78 00 - Closeout Submittals.
.2 Section 01 74 11 - Cleaning.
- 1.3 Inspection and Declaration .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
.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.
.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 Certificates required by provincial Department of Environment have been submitted.
.4 Operation of systems have been demonstrated to Departmental Representative's personnel.
.5 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, in conjunction with Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

Parks Canada
Terra Nova National Park
Salt Shed Upgrades
Project No. PRO000462

Closeout Procedures

Section 01 77 00
Page 2

December 2014

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Related Sections .1 Section 01 33 00 - Submittal Procedures.
.2 Section 01 45 00 - Quality Control.
.3 Section 01 77 00 - Closeout Procedures.
- 1.3 Submission .1 Prepare instructions and data using personnel experienced in maintenance and operation of described products.
.2 Copy will be returned after final inspection, with Departmental Representative's comments.
.3 Revise content of documents as required prior to final submittal.
.4 Ensure spare parts, maintenance materials and special tools provided are new, undamaged, free of defects, and of same quality and manufacture as products provided in Work.
.5 If requested, furnish evidence as to type, source and quality of products provided.
.6 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
.7 Pay costs of transportation.
- 1.4 Format .1 Organize data in the form of an instructional manual.
.2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
.3 Cover: Identify binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
.4 Arrange content by systems, under Section numbers and sequence of Table of Contents.

- .5 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
 - .7 Text: Manufacturer's printed data, or typewritten data.
 - .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- 1.5 Contents - Each Volume
- .1 Table of Contents: provide title of project;
 - .1 date of submission; names,
 - .2 addresses, and telephone numbers of Consultant and Contractor with name of responsible parties;
 - .3 schedule of products and systems, indexed to content of volume.
 - .2 For each product or system:
 - .1 list names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
 - .3 Product Data: mark each sheet to clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information.
 - .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
 - .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.
- 1.6 As-Builts and Samples
- .1 Maintain at the site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to the Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.

1.7 Recording
Actual Site
Conditions

- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.
- .1 Record information on set of opaque drawings, provided by Departmental Representative.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .2 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .3 Field changes of dimension and detail.
 - .4 Changes made by change orders.
 - .5 Details not on original Contract Drawings.
 - .6 References to related shop drawings and modifications.
- .5 Specifications: legibly mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.

- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- 1.9 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.
- .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.
- 1.10 Materials and Finishes
- .1 Building Products, Applied Materials, and Finishes: include produce data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used

PART 3 - EXECUTION

- 3.1 Not Used .1 Not Used

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 11 00 - Summary of Works
 - .2 Section 01 74 19 - Construction/Demolition Waste Management and Disposal.
 - .3 Section 01 35 43 - Environmental Procedures.
- 1.2 Description
- .1 This section specifies requirements for demolishing and removing wholly or in part various items designated to be removed or partially removed.
- 1.2 Protection
- .1 Protect existing objects designated to remain. In event of damage, immediately replace or make repairs to approval of, and at no additional cost to, Departmental Representative.

PART 2 - PRODUCTS

- 2.1 Not Used
- .1 Not Used.

PART 3 - EXECUTION

- 3.1 Execution
- .1 Inspect site and verify with Departmental Representative objects designated for removal.
- 3.2 Removal
- .1 Remove in their entirety all materials and objects specified for removal.
 - .2 Do not disturb adjacent work designated to remain in place.
 - .3 Remove materials to limits indicated on drawings and as indicated on plans.
- 3.3 Safety Code
- .1 Do demolition work in safe manner and according to provincial regulations.

3.4 Disposal Of
Material

1. The Owner will have the first right of refusal (at no cost) to all demolished materials except those designated for reuse. If the Owner does not want any of the materials, such materials will become the property of the contractor to be removed from the site and disposed of to satisfaction of Departmental Representative and in accordance with all applicable permits.

3.5 Restoration

1. Upon completion of work, remove debris, trim surfaces and leave work site in clean condition.
2. Reinstate areas and existing works outside areas of demolition to conditions that existed prior to commencement of work.

PART 1 - GENERAL

- | | | |
|--------------------------|----|--|
| 1.1 Related Requirements | .1 | Section 13 34 24- Fabricated Structures |
| | .2 | Section 01 45 00- Quality Control |
| 1.2 References | .1 | ASTM International |
| | .1 | ASTM A 325-07a, Standard Specifications for Structural Bolts, steel, Heat Treated, 120/105 ksi Minimum Tensile Strength. |
| | .2 | ASTM 325M-08, Standard Specification for Structural Bolts, Steel, Heat Treated 830 MPa Minimum Tensile Strength. |
| | .3 | ASTM A 490-04ae, Standard Specification for High-Strength Steel Structural Bolts, Classes 10.9 and 109.3; For Structural Steel Joints. |
| | .2 | Canadian General Standards Board (CGSB) |
| | .1 | CAN/CGSB-95.10-99. Protective Coatings for Metals. |
| | .3 | Canadian Institute of Steel construction (CISC)/Canadian Paint Manufacturers Association (CMPA) |
| | .1 | Handbook of the Canadian Institute of Steel Construction. |
| | .2 | CISC/CPMA Standard 2-75, Quick-Drying Primer for use on Structural Steel. |
| | .4 | Canadian Standards Association (CSA International) |
| | .1 | CSA G40.20G40.21-04, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel. |
| | .2 | CAN/CSA-G164-M92, Hot Dip Galvanizing of irregularly Shaped Articles. |
| | .3 | CAN/CSA-S16, Limit States Design of Steel Structures. |
| | .4 | CAN/CSA-S316, North American Specifications for the Design of Cold formed Steel Structural Members. |
| | .5 | CSA W47.1, Certification of companies for Fusion Welding of Steel. |
| | .6 | CSA w48, Filler Metals and Allied Materials for metal Arc Welding. |
| | .7 | CSA W55.3, Resistance Welding Qualification Code for Fabricators of Structural members Used in Buildings. |
| | .8 | CSA W59 Welded Steel Construction (Metal Arc Welding). |

- 1.2 References (cont'd)
- .5 Master Painters Institute
 - .1 MPI-INT 5.1, Structural Steel and Metal Fabrications.
 - .2 MPI-EXT 5.1, Structural Steel and Metal Fabrications.
 - .6 The Society for Protective Coatings (SSPC) and National Association of Corrosion engineers (NACE) International
 - .1 NACE No. 3/SSPCE SP-6, Commercial Blast Cleaning.
- 1.3 Action and Informational Submittals
- .1 Provide submittals in accordance with Section 31 33 00 Submittal Procedures.
 - .2 Shop Drawings:
 - .1 Provide drawings stamped and signed by Professional Engineer registered or licensed in the Province of Newfoundland Labrador, Canada.
 - .3 Erection Drawings:
 - .1 Submit erection drawings indicating details and information necessary for assembly and erection purposes including:
 - .1 Description of methods
 - .2 Sequence of erection
 - .3 Type of equipment used in erection
 - .4 Temporary bracings
 - .4 Fabrication drawings:
 - .1 Submit fabrication drawings showing designed assemblies, components and connections are stamped and signed by qualified Professional Engineer licensed in the Province of Newfoundland Labrador, Canada.
 - .5 Source Quality Control Submittals:
 - .1 Submit copy of mill test reports two (2) weeks prior to fabrication of structural steel.
 - .1 Mill test reports to show chemical and physical properties and other details of steel to be incorporated in project, in accordance with approved design.
 - .2 Provide mill test reports certified by metallurgists qualified to practice in the Province of Newfoundland Labrador, Canada.
 - .6 Fabricator Reports:
 - .1 Provide structural steel fabricator's affidavit stating that materials and products used in fabrication conform to applicable material and products standards specified and indicated in design.

- 1.4 Delivery, Storage and Handling
- .1 Deliver materials in manufacturer's original, undamaged containers with identification labels intact.
 - .2 Deliver, store and handle materials in accordance with Section 01 11 00 Summary of Work.
 - .3 Dispose of packaging waste in accordance with Section 01 11 00 Summary of Work and Section 01 35 43 Environmental Procedures.

PART 2-PRODUCTS

- 2.1 Design Requirements
- .1 Design details and connections in accordance with requirements of CAN/CSA-S16 and CAN/CSA-S136 to resist forces moments, shears and allow for movements as indicated in design.
 - .2 Submit sketches and design calculations stamped and signed by qualified professional engineer licensed in the Province of Newfoundland Labrador, Canada for design.
 - .3 Building structure to fit onto existing concrete foundation and workings. Refer to drawings in Appendix C for existing concrete foundation structure details.
- 2.2 Materials
- .1 As determined in design.
- 2.3 Fabrication
- .1 Fabricate structural steel in accordance with CAN/CSA-S16, CAN/CSA-S136 and in accordance with design.
- 2.4 Shop Painting
- .1 Clean, prepare surfaces and shop prime structural steel in accordance with applicable standards as specified in design.
 - .2 Paint exposed surfaces of the structure in accordance with applicable standards as specified in the design.
 - .1 Colour samples to be provided to Departmental Representative two (2) weeks prior to start of fabrication. Colour to be approved by Departmental Representative.

PART 3 EXECUTION

- 3.1 Application .1 Comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions and datasheets.
- 3.2 Erection .1 Erect structural steel, as indicated and in accordance with CAN/CSA-S16, CAN/CSA-S136 and in accordance with erection drawings.
- .2 Field cutting or altering of structural members to the approval of the Departmental Representative in consultation with the Design Engineer.
- 3.3 Field Quality Control .1 Inspection and testing of materials and workmanship will be carried out by a certified testing laboratory approved by the Departmental Representative.
- .2 Provide safe access and working areas for testing on site, as required by testing agency and as authorized by Departmental Representative.
- .3 Submit test reports to Departmental Representative within one (1) week of completion of inspection.
- .4 Contractor will pay for costs of tests as specified and in Section 01 11 00 Summary of Work and Section 01 45 00 Quality Control.
- .5 Test shear studs in accordance with CSA W59.
- 3.4 Field Painting .1 Paint in accordance with specifications of design.
- .1 Touch up damaged surfaces and surfaces without shop coat with primer and topcoat to NACE No. 3/SSPC-SP-6 except as specified otherwise by design.
- 3.5 Cleaning .1 Clean in accordance with Section 01 74 11 Cleaning.
- .2 Store and dispose of waste in accordance with Section 01 11 00 Summary of Work and Section 01 35 43 Environmental Protection.

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 33 00 - Submittal Procedures.
 - .2 Section 01 74 21 - Waste Management and Disposal.
 - .3 Section 06 10 11 - Rough Carpentry
- 1.2 References
- .1 American Wood-Preservers' Association (AWPA)
 - .1 AWPA M2, Standard Inspection of Treated Wood Products.
 - .2 AWPA M4, Standard for the Care of Preservative-Treated Wood Products.
 - .2 Canadian Standards Association (CSA)
 - .1 CSA O80 Series, Wood Preservation.
 - .2 CSA O322, Procedure for Certification of Pressure-Treated Wood Materials for Use in Preserved Wood Foundations.
- 1.3 Certificates
- .1 For products treated with preservative by pressure impregnation submit following information certified by authorized signing officer of treatment plant upon request:
 - .1 Information listed in AWPA M2 and revisions specified in CSA O80 Series, Supplementary Requirement to AWPA M2 applicable to specified treatment.
 - .2 Moisture content after drying following treatment with water-borne preservative
 - .3 Acceptable types of paint, stain, and clear finishes that may be used over treated materials to be finished after treatment.

- 1.4 Waste Management and Disposal
- .1 Do not dispose of preservative treated wood through incineration.
 - .2 Do not dispose of preservative treated wood with other materials destined for recycling or reuse.
 - .3 Dispose of treated wood, end pieces, wood scraps and sawdust at sanitary landfill approved by Owner's Representative.
 - .4 Dispose of unused wood preservative material at official hazardous material collections site approved by Owner's Representative.
 - .5 Do not dispose of unused preservative material into sewer system, into streams, lakes, onto ground or in other location where they will pose health or environmental hazard.

PART 2 - PRODUCTS

- 2.1 Materials
- .1 Preservative: to CAN/CSA-080 Series, stained finish.
 - .2 Solvent: to CAN/CSA-080.201.

PART 3 - EXECUTION

- 3.1 Application: Preservative
- .1 Treat lumber to CAN/CSA- 080 Series.
 - .2 Following water-borne preservative treatment, dry material to maximum moisture content of 19%.
- 3.2 Application: Field Treatment
- .1 Comply with AWPA M4 and revisions specified in CAN/CSA-080 Series, Supplementary Requirements to AWPA Standard M2.
 - .2 Treat all field cuts with two (2) coats of clear copper naphenate or 5% pentachlorophenol solution, water repellent preservative.
 - .3 Remove chemical deposits on treated wood to receive applied finish.

PART 1 - GENERAL

- 1.1 Related Sections
 - .1 Section 06 05 73 Wood Treatment

- 1.2 References
 - .1 Canadian Standards Association (CSA International)
 - .1 CSA B111-1974(R1998), Wire Nails, Spikes and Staples.
 - .2 CAN/CSA-G164-M92(R1998), Hot Dip Galvanizing of Irregularly Shaped Articles.

 - .2 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2000.

- 1.3 Quality Assurance
 - .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

 - .2 Plywood identification: by grade mark in accordance with applicable CSA standards.

 - .3 Plywood, OSB and wood based composite panel construction sheathing identification: by grademark in accordance with applicable CSA standards.

- 1.4 Waste Management And Disposal
 - .1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

 - .2 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site bins for recycling.

 - .3 Divert unused wood materials from landfill to recycling reuse composting facility approved by Departmental Representative.

 - .4 Do not dispose of preservative treated wood through incineration.

 - .5 Do not dispose of preservative treated wood with materials destined for recycling or reused.

1.4 Waste
Management And
Disposal (Cont'd)

- .6 Dispose of treated wood, end pieces, wood scraps and sawdust at sanitary landfill approved by Departmental Representative.
- .7 Dispose of unused wood preservative material at official hazardous material collections site approved by Departmental Representative.
- .8 Do not dispose of unused preservative material into sewer system, into streams, lakes, onto ground or in other locations where they will pose health or environmental hazard.

PART 2 - PRODUCTS

2.1 Lumber Material

- .1 Lumber: unless specified otherwise, preservative treated softwood, S4S, moisture content 19% or less in accordance with following standards:
 - .1 CAN/CSA-0141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Furring, blocking, nailing strips, grounds, rough bucks, cants, and curbs:
 - .1 S2S is acceptable for all locations.
 - .2 Board sizes: "Standard" or better grade.
 - .3 Dimension sizes: "Standard" light framing or better grade.
 - .4 Post and timbers sizes: "Standard" or better grade.

2.2 Panel Materials

- .1 Douglas fir plywood (DFP): to CSA 0121, standard construction.
- .2 Canadian softwood plywood (CSP): to CSA 0151, standard construction.
- .3 Plywood, OSB and wood based composite panels: to CAN/CSA-0325.
- .4 Lumber sheathing: unless specified otherwise, ACQ, softwood, T&G, moisture content 19% or less in accordance with following standards:
 - .1 CAN/CSA-0141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.

- 2.3 Accessories
- .1 Nails, spikes and staples: to CSA B111.
 - .2 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- 2.4 Finishes
- .1 Galvanizing: to CAN/CSA-G164, use galvanized fasteners for exterior work interior highly humid areas pressure- preservative treated lumber.
- 2.5 Wood Preservative
- .1 Surface-applied wood preservative: clear coloured, copper quaternary solution, water repellent preservative.

PART 3 - EXECUTION

- 3.1 Preparation
- .1 Treat surfaces of material with wood preservative, before installation.
 - .2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.
 - .3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.
 - .4 Treat material as indicated as follows:
 - .1 All new lumber, all surfaces, prior to installation.
- 3.2 Installation
- .1 Comply with requirements of NBC, supplemented by the following paragraphs.
 - .2 Install furring and blocking as required to space-out and support casework, lumber siding, fascia, soffit, and other work as required.
 - .3 Align and plumb faces of furring and blocking to tolerance of 1:600.
 - .4 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.

3.3 Erection

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.

PART 1 - GENERAL

- 1.1 Related Sections . 1 Section 03 33 00 - Submittal Procedures.
Section 05 12 23 - Structural Steel for Buildings
- 1.2 References . 1 National Building Code of Canada (NBC) 2010 and
CAN/ULC S109.
- . 2 Do structural steel work to CAN/CSA-S16-01.
- . 3 Do Welding to CSA W59.
- 1.3 System Description . 1 Provide building structure and enclosure to
physical dimensions shown on drawings and as stated
below.
- .1 Height of the building structure to be 10.729m
from asphalt on grade to the underside of the
peak of the structure. The structure is to be
completely clear span without interior columns.
All door and mechanical openings to be such that
vertical tension in membrane is always
maintained.
- .2 The building dimensions are as follows:
15.240m x 18.288m Single Entry Roof Truss Span
@ 6.096m o.c.
- .3 Provide a flexible door screen to full height
and width of door opening. The door screen shall
be made of 400mm wide by 4mm thick ribbed low
temperature PVC strips with 100% overlap. The
strips shall be mounted with galvanized
hardware by the same manufacturer as the PVC
strips. Provide Safe-T Loc strips with Safe-T
Loc universal mounting hardware by
TM1 Incorporated, or approved equal.
- .2 Building occupancy as defined by National Building
Building Code of Canada 2010 is Group F,
Division 2 and 3.
- .3 Building structure and enclosure to fit onto
existing concrete foundation and workings. Refer to
drawings in Appendix C for existing concrete
foundation structure details.

1.3 System
Description
Cont'd)

- .4 Coordinate and cooperate to the fullest extent with the General Contractor and General Contractor's sub-trades for all aspects of the project including but not limited to support framing, other various equipment including lighting, and mechanical ventilation equipment.
- .5 Manufacturer must be proven, established manufacturer and have minimum 5 years' experience in design, fabrication and delivery of structures of similar size.
- .6 Generally, building is intended to store salt.

1.4 Design
Requirements

- .1 Design in accordance with Section 05 12 23 Structural Steel for Buildings.
- .2 Design building to allow for thermal movement of component materials caused by ambient temperature range of 100°C without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects. Membrane grade to provide minimum cold crack of -50°C. The membrane is to be wrinkle free when tensioned and shall remain so throughout 100°C temperature range.
- .3 Building shall be watertight. All around except at overhead door opening location.
- .4 Provide for positive drainage of condensation occurring within fabric construction and water entering at joints, to exterior face of concrete wall.
- .5 Design structure to allow installation of electrical and mechanical equipment. Likewise, the structure shall accept penetrations through the membrane for access doors and mechanical services with minimal modification.
- .6 The structure shall be designed such that it can be readily retrofitted with other ancillary systems such as lighting, sprinklers, etc.
- .7 Bird Net: supply and install approved bird net under side of roof trusses to the full area.

- .8 Provide a non-metallic bird screen at the intersection of the foundation walls and exterior stressed skin membrane.
- .9 Install building assembly to permit easy replacement of components.
- .10 Allow for ceiling, piping, conduit and other interior dead loads imposed on this structure coordinate with the General Contractor.
- .11 Assemble and secure building elements to building frame as per the instructions of the Manufacturer's Engineer.
- .12 Building structure and enclosure to fit onto existing concrete foundation and workings. Refer to drawings in Appendix C for existing concrete foundation structure details.

1.5 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submitted drawings to bear signature and seal of professional Engineer registered in Province of Newfoundland Labrador for fabricator designed assemblies, components and connections. A stipulation to this effect may appear on submitted drawings.
- .3 Install according to grid lines, structural members and connection details, bearing and anchorage details, framed openings, accessories, schedule of materials and finishes, camber and loadings, fasteners and welds as per the Reviewed shop drawings and SNC-Lavalin Inc. drawings.
- .4 Describe requirements of systems of components related to this work but provided by others. Obtain necessary information required to detail this work including methods of integration and securing.
- .7 Shop drawings along with applied loads and member resistance calculations to be submitted to Consultant for review.
- .8 Indicate erection dimensions and methods.
- .9 Submit erection drawings for approval before fabrication.

1.6 Waste Management
And Disposal

- .1 Separate and recycle waste materials in accordance with Waste Management Plan.
- .2 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.
- .3 Fold up metal banding, flatten and place in designated area for recycling.

1.7 Warranty

- .1 The Contractor hereby warrants that the entire Building enclosure will be water and weather tight (except at the main door opening), structurally sound and free from distortion. Enclosure will be free from corrosion and deterioration from interior environment of salt storage facility, sunlight UV protected, weather or oxidation, from permanent deformation and free of leaks under load for a period of 15 years on membrane and 15 years on frame after the date of completion.
- .2 The structure shall be site-inspected by supplier once every 24-month period over duration of warranty and 30 days before the warranty period is over with inspections to be done with Owner's representative present.
- .3 Manufacturer's Warranty on Membrane to be 8 years complete replacement and an additional 7 years prorated. For the full 15 year term, the manufacturer's warranty shall include labour, equipment and materials to remove existing membrane and supply and reinstall new membrane, and all other associated cost.
- .4 Manufacturer's Warranty on corrosion to be 15 years complete replacement including labour, equipment and materials and all other associated cost to remove existing membrane, frame and supply and reinstall membrane and frames. Frames to be fabricated so that they may be disassembled at a later date and hot dipped galvanized in the future without modification to the frames whatsoever.
- .5 The steel truss, including the steel purlins shall be warranted by the Manufacturer to be free from defects under normal use for a period of 20 years. The manufacturer shall pay for the cost of materials and replacement parts.

PART 2 - PRODUCTS

2.1 Materials

- .1 Building materials: non-combustible or combustible construction in accordance with the National Building Code of Canada for use and occupancy specified.
- .2 Fire resistive building elements: in accordance with the National Building Code of Canada for use and occupancy specified.
- .3 Cladding membrane fabric to meet the requirements of CAN/ULC-S109-M. See Section 1.7 for Warranty. Membrane Color - to be selected by the Owner. Submit color chart for color selection one week after the contract award.
- .4 Structural Steel: Hollow structural sections (HSS): to CSA G40.21 Type 350W. All other structural steel: to CSA G40.21 Type 300W (minimum).
- .5 All Steel Galvanized: hot dip galvanizing after fabrication to CSA G164-M92.
- .6 Repair areas of bare material at galvanized surfaces with zinc rich paint. Restrict use of zinc paint to touch up only. Replace damaged galvanized material otherwise
- .7 Fasteners: Stainless Steel AISI 304 (all bolts, nails and screw fasteners for Stressed Membrane building supplied by Manufacturer).
- .8 Welding Materials: To CSA W59-1989.
- .9 Sealants: Applicable to salt environment and CGSB 19-GP-14M. Primer: as recommended by the sealant manufacturer.
- .10 Samples: Provide duplicate samples of each and every material to be used in the wall system. Components to be assembled and include joints and flashing details.
- .11 Metals/wood/concrete/plastics: non-combustible, and conforming to flame spread, fuel contributed and smoke developed requirements of National Building Code of Canada and CAN/ULC-S109-M.
- .12 The stressed skin membrane structure is to be designed for loads due to dead load, wind, snow, earthquake and wind loads.

-
- 2.1 Materials (cont'd)
- .13 Membrane Tensioning Hardware: The fabric membrane shall be tensioned with load rated hardware, which is plated/hot dip galvanized so as to prevent corrosion.
 - .14 Structural steel members have direct contact with salt. Provide extra galvanizing or coatings to prevent from rusting.
 - .15 Bird Net: supply and install approved bird net under side of roof trusses to the full area.
 - .16 Acceptable Structure Suppliers:
 - .1 HSS structure systems
 - .2 Coverall
 - .3 Sprung
 - .4 Other manufacturers subject to the approval of the Engineer.
- 2.2 Fabrication
- .1 Fabricator certification to CSA Qualification Code W47.1-1992.
 - .2 Accurately fit and rigidly frame together joints, corners and mitres. Match components carefully to produce continuity of line and design. Make joints and connections smooth so as not to wear the membrane. Materials in contact with the membrane shall be smooth.
- 2.3 Finishes
- .1 Colours of membrane shall minimize internal solar gain. Colour of membrane shall allow the structure to blend with its surroundings. The colour to be selected by the Owner. Submit color samples for approval.
 - .2 The roof membrane is to be manufactured in individual sections to fit securely into each bay. At no time will the membrane be manufactured as one (1) piece to be placed over the entire length and width of the building.

PART 3 - EXECUTION

3.1 Erection

- .1 Deliver structure on site, unload and store steel in a manner to prevent damage to the hot dipped galvanizing coating or protective coatings. All coatings damaged due to storage or erection or welding or by any other means to be repaired to the satisfaction of the Owner's Requirements.
- .2 Install framed openings required for door opening, mechanical ducts and louvres as per building elevations. Materials for framing openings to be supplied by Manufacturer. Exact location of openings To be confirmed. Contractor to provide details for securing and making watertight the exterior cladding and interior vapour barrier.
- .3 Carry out all required grouting under base plates with non-shrink grout to a minimum thickness of 25 mm.
- .4 Bolt torquing shall be carried out in accordance with CAN/CSA S16-01 to Clause 23.8 Turn of Nut Tightening. All bolts shall be made "Snug Tight", and then tightened additionally as per Clause 23.8.
- .5 Erect building structure and enclosure elements to meet the requirements stated herein, the Manufacturer's Requirements; Federal and Provincial Requirements including safety requirements; and Owner's Requirements.

APPENDIX A
FIELD PHOTOS OF EXISTING SALT SHED FOUNDATION



Figure 1: West Elevation



Figure 2: East Elevation

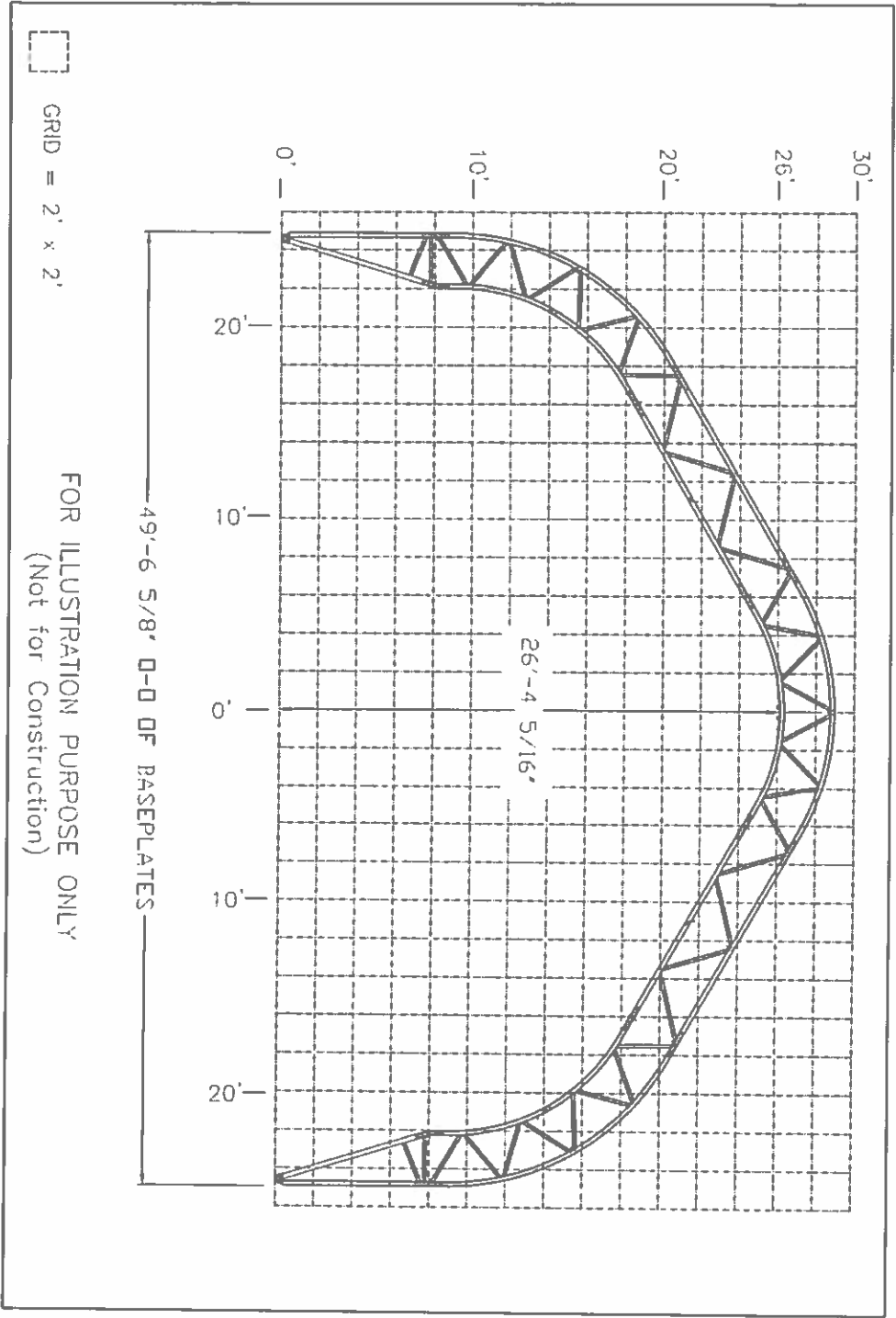


Figure 3: North Elevation



Figure 4: South Elevation

APPENDIX B
TRUSS ILLUSTRATION



Appendix B - Truss Illustration

APPENDIX C
LIST OF DRAWINGS (EXISTING FOUNDATION)

A1 – Site Plan

A2 – Foundation

A3 – Elevations

A4 – Details

A5 – Details (2)

A6 – Anchor Bolt Layout / Templates

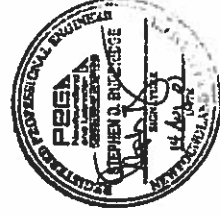
SALT SHED EXPANSION PROJECT

TERRA NOVA NATIONAL PARK, NL

LIST OF DRAWINGS:

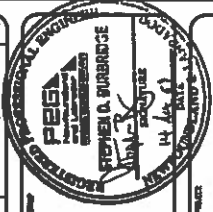
- A1 - SITE PLAN
- A2 - FOUNDATION
- A3 - ELEVATIONS
- A4 - DETAILS
- A5 - DETAILS(2)
- A6 - ANCHOR BOLT LAYOUT/TEMPLATES

PROJECT NO. TNNP 2008-08-100



TNNP
 GENERAL DELIVERY
 GLENDOWNS, N.C. A05 210
 TEL: (706) 533-3136

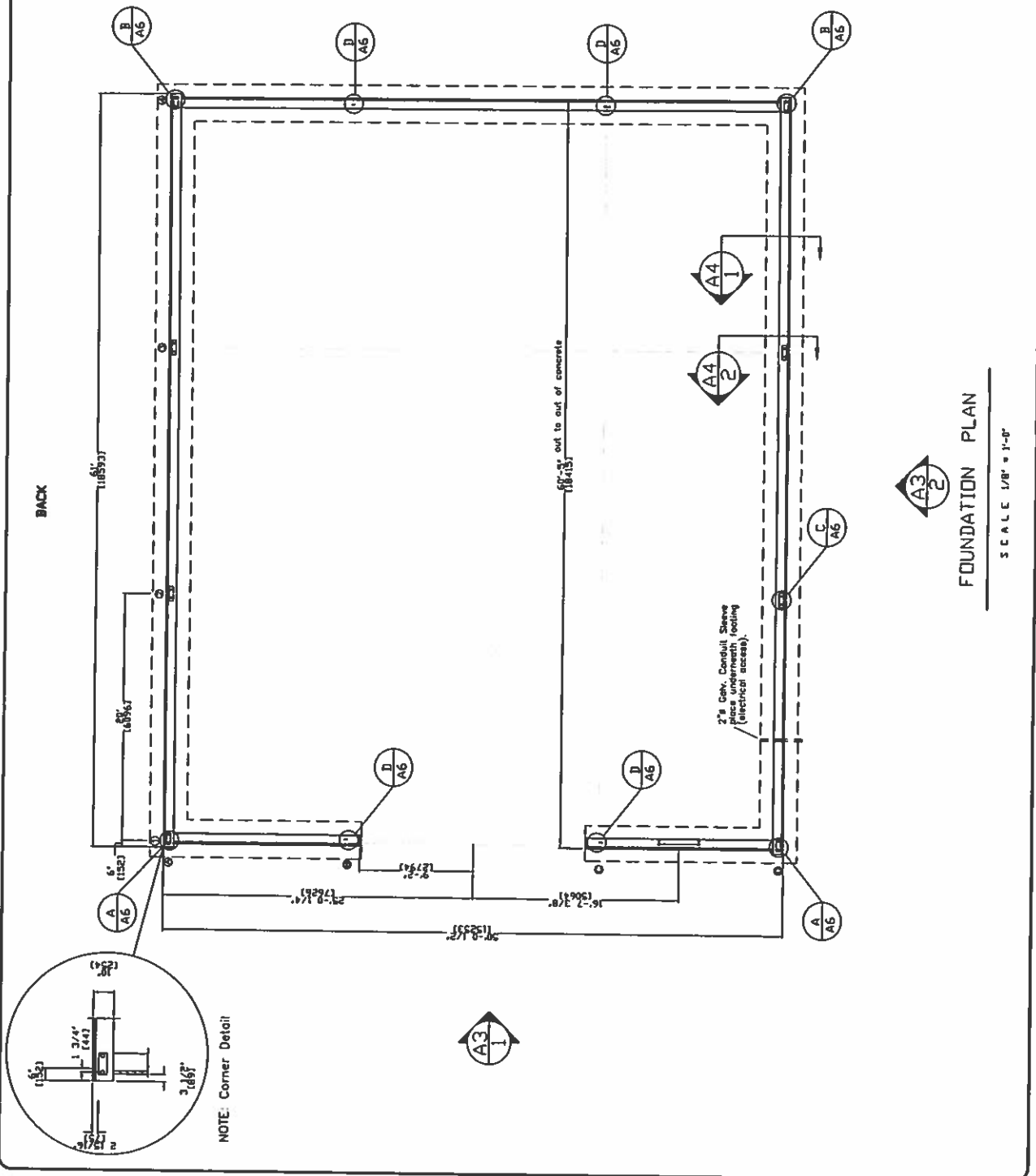
- NOTES:
1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2008 INTERNATIONAL RESIDENTIAL CODE.
 2. ALL DIMENSIONS ARE IN FEET AND INCHES.
 3. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
 4. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
 5. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
 6. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
 7. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
 8. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
 9. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
 10. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.



PROJECT:
 SALT-SHED
 TERRA NOVA
 NATIONAL PARK
 FOUNDATION

DESIGNED BY:
 G. WELLS
 DATE:
 1/8" = 1'0"
 AUG 09

PROJECT NO:
 TNNP-2009-08-100
 SHEET:
 A2
 OF:
 1

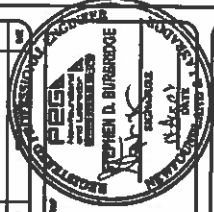


TNNP

GENERAL DELIVERY
GLOUCESTOWN, N.H. AUG 21.0
TEL. (703) 533-3136

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.
2. ALL DIMENSIONS ARE IN P.P.M. UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
5. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
6. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
7. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
8. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
9. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
10. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.

NO.	DESCRIPTION	DATE

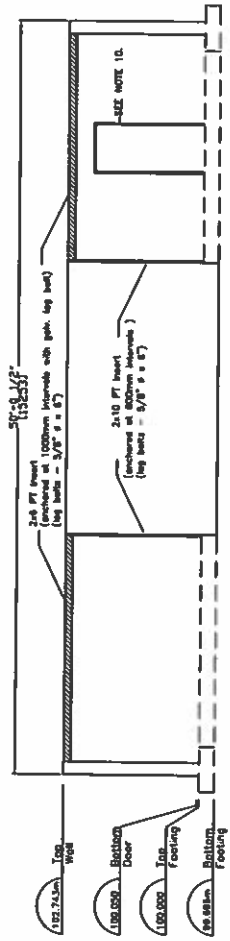


PROJECT: SALT-SHED
TERRA NOVA
NATIONAL PARK

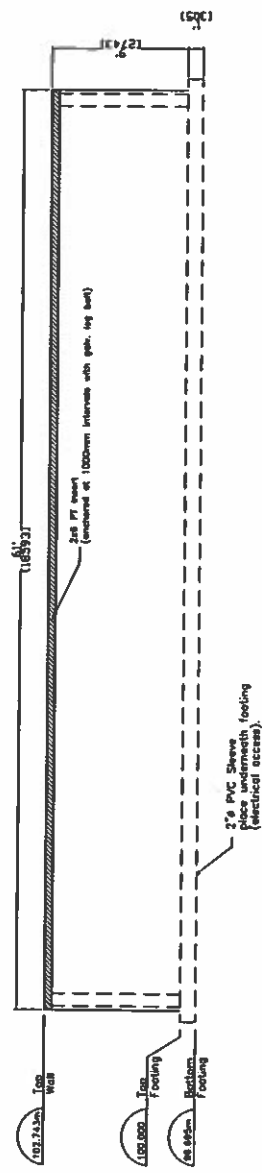
DATE: ELEVATIONS

DESIGN BY:	G. WELLS
APPROVED BY:	S. BURBRIDGE
SCALE:	1/8" = 1'-0"
DATE:	AUG 09

PROJECT NO.	TNNP-2009-08-100
DATE:	A3
REVISION:	1

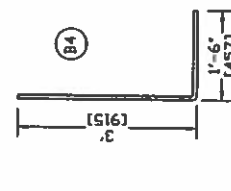


A3 1
EAST ELEVATION
SCALE 1/8" = 1'-0"

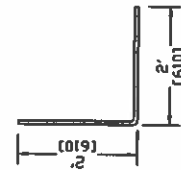


A3 2
SOUTH ELEVATION
SCALE 1/8" = 1'-0"

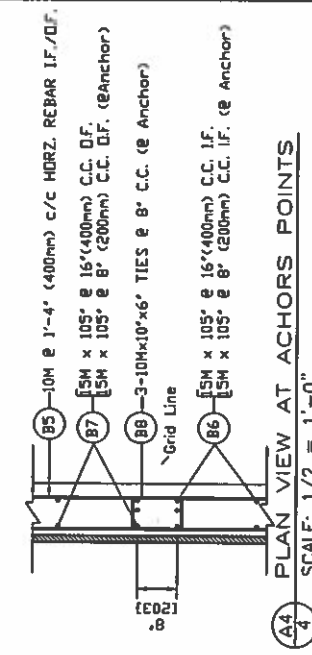
Note: B5 & B9 WILL BE CONTINUOUS AT CORNERS. USE 24"x24" CORNER BARS.



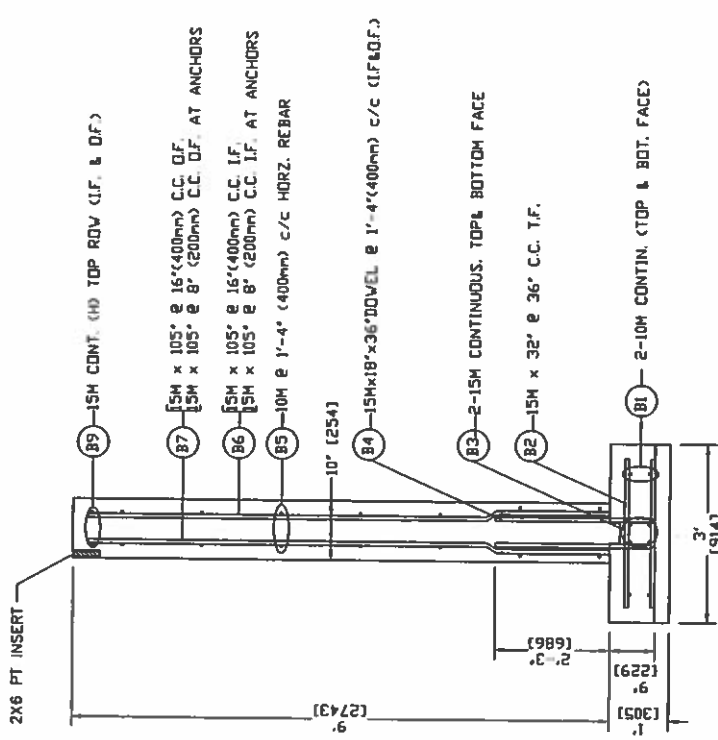
A4 3 REBAR DOWEL (Vert.)
SCALE: 1/2 = 1'-0"



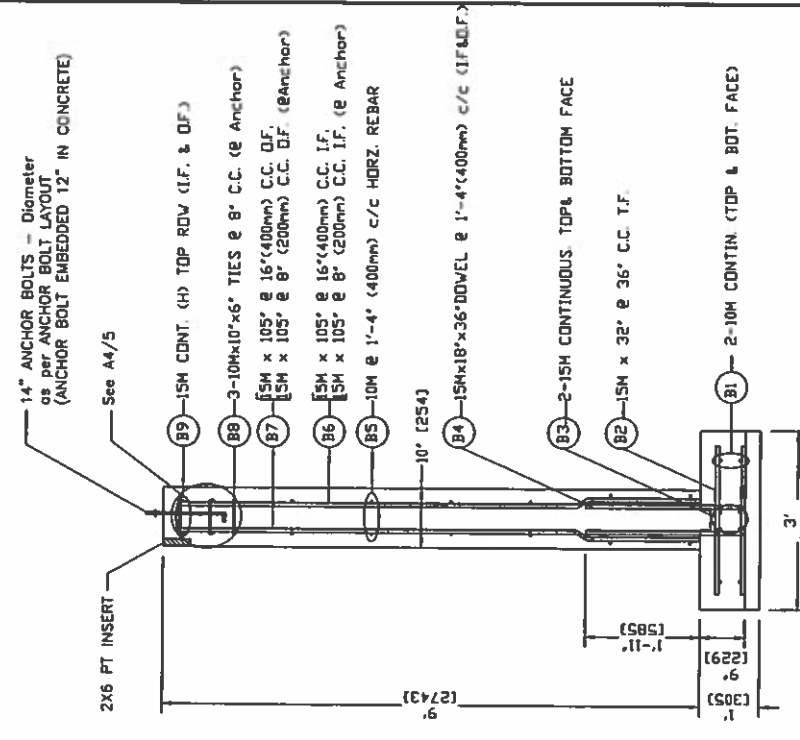
A4 4 CORNER REBAR (Horiz.)
SCALE: 1/2 = 1'-0"



A4 4 PLAN VIEW AT ANCHOR POINTS
SCALE: 1/2 = 1'-0"



A4 1 FOUNDATION WALL AT ARCH/ANCHOR
SCALE: 1/2 = 1'-0"



A4 2 FOUNDATION WALL AT ANCHOR POINTS
SCALE: 1/2 = 1'-0"

TNNP
GENERAL DELIVERY
CLOVERTOWN, NC, AUG 2LD
Tel: (709) 533-3138

1. CONSTRUCTION MUST BE ACCORDING TO THE SPECIFICATIONS AND NOTES.
2. ALL REBAR SHALL BE EPOXY COATED.
3. ALL REBAR SHALL BE EPOXY COATED.
4. ALL REBAR SHALL BE EPOXY COATED.
5. ALL REBAR SHALL BE EPOXY COATED.
6. ALL REBAR SHALL BE EPOXY COATED.
7. ALL REBAR SHALL BE EPOXY COATED.
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9. ALL REBAR SHALL BE EPOXY COATED.
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11. ALL REBAR SHALL BE EPOXY COATED.
12. ALL REBAR SHALL BE EPOXY COATED.
13. ALL REBAR SHALL BE EPOXY COATED.
14. ALL REBAR SHALL BE EPOXY COATED.
15. ALL REBAR SHALL BE EPOXY COATED.
16. ALL REBAR SHALL BE EPOXY COATED.



SALT-SHED
TERRA NOVA
NATIONAL PARK

DESIGNED BY
G. WELLS
DATE
1/2" = 1'0"
AUG 09

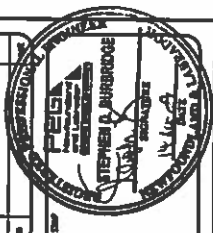
PROJECT NO.
TNNP-2009-00-100
SHEET
A4
OF
2

TINP

GENERAL DELIVERY
 CLEVELAND, OH. AGC 210
 TEL: (708) 533-3136

1. CONTRACTOR MUST VERIFY DIMENSIONS AND LOCATIONS OF ALL EXISTING UTILITIES AND SERVICES.
2. ALL DIMENSIONS ARE IN FEET AND INCHES.
3. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
4. ALL CONCRETE WORK INCLUDING FORMS SHALL BE TO THE CENTERLINE OF THE WALL UNLESS NOTED OTHERWISE.
5. ALL CONCRETE SHALL BE PLACED AND COMPACTED IN 12" MAX. LIFT.
6. ALL CONCRETE SHALL BE CURED FOR 7 DAYS.
7. FORMS TO BE SET ON UNDERLINED SOIL.
8. SEE GENERAL NOTES AND SPECIFICATIONS.
9. ALL REINFORCING STEEL SHALL BE #4.

NO.	DESCRIPTION	DATE



PROJECT: SALT-SHED
 TERRA NOVA
 NATIONAL PARK

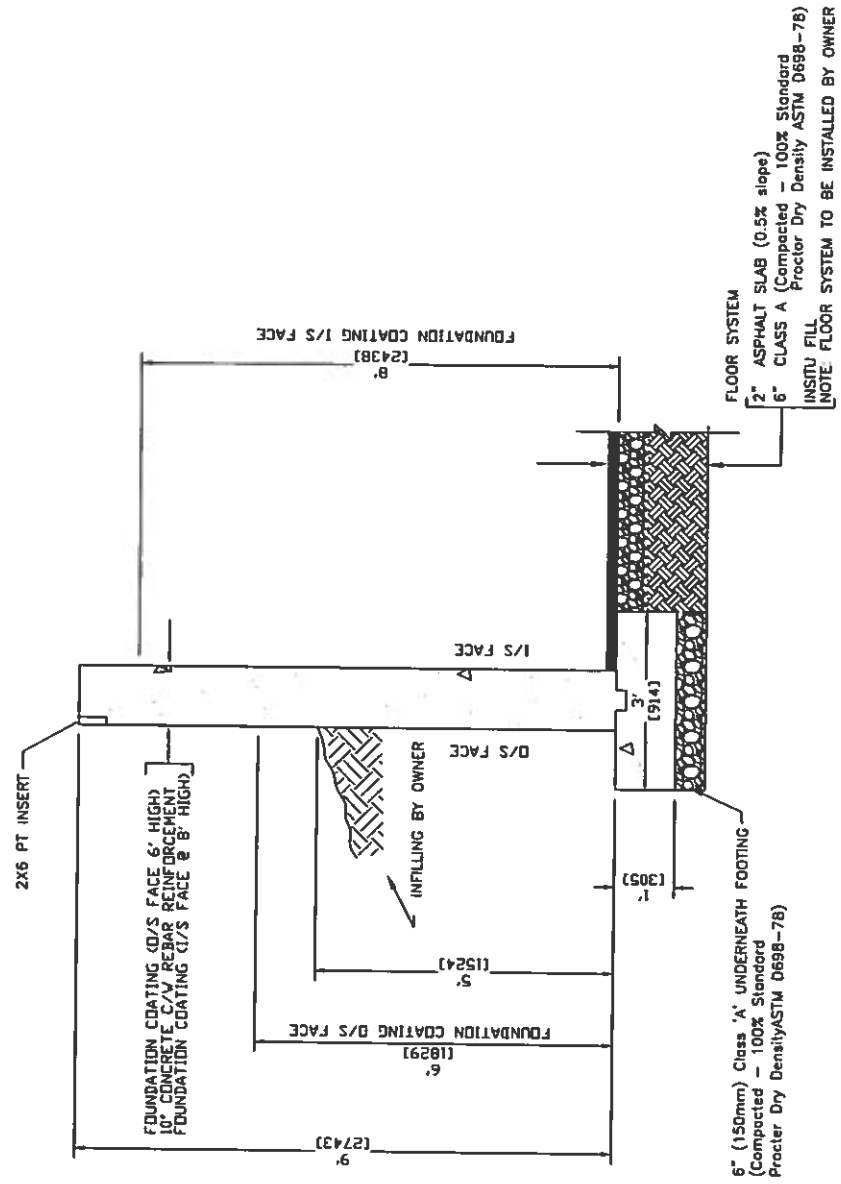
DATE: 1/2" = 1'-0"

DETAILS(2)

DESIGNED BY: S. BURBRIDGE
 DATE: AUG 09

SEE DRAWING FOR DIMENSIONS OF WALL AND TO BE INSTALLED BY CONTRACTOR.

PROJECT NO: TINP-2009-08-100
 SHEET: A5
 NUMBER: 2

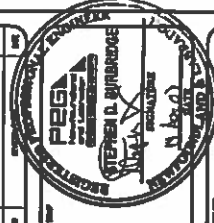


① FOUNDATION WALL/FOOTING DETAILS (2)
 SCALE: 1/2" = 1'-0"

TNNP
 GENERAL DELIVERY
 PROJECT NO. 210
 DATE (7/09) 333-3138

- NOTES:
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS WITH THE OWNER.
 2. DIMENSIONS SHOWN ARE IN FEET AND INCHES.
 3. DO NOT SCALE DRAWINGS.
 4. ALL DIMENSIONS TO FACE UNLESS OTHERWISE NOTED.
 5. ALL DIMENSIONS TO FACE UNLESS OTHERWISE NOTED.
 6. ALL DIMENSIONS TO FACE UNLESS OTHERWISE NOTED.
 7. PROVIDE TO SET ON UNFINISHED SURFACE.
 8. ALL WORK IS TO BE ACCORDANCE TO THE AIAA AND ALL APPLICABLE CODES OF CONDUCT.
 9. USE GENERAL NOTES AND SPECIFICATIONS.
 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 11. VERIFY ALL DIMENSIONS AND LOCATIONS WITH THE OWNER.

NO.	REVISIONS	DATE

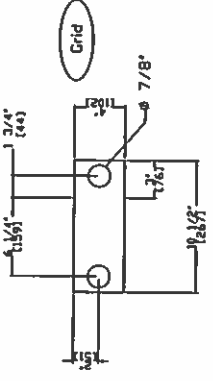


SALT-SHED
 TERRA NOVA
 NATIONAL PARK
 ANCHOR BOLT
 LAYOUT/TEMPLATE

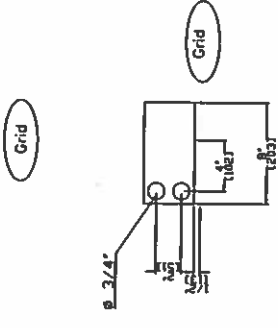
DESIGNED BY
 C. WELLS
 DATE
 N.T.S. AUG'09

PROJECT NO.
 TNNP-2009-08-100
 SHEET
 A6 OF 1

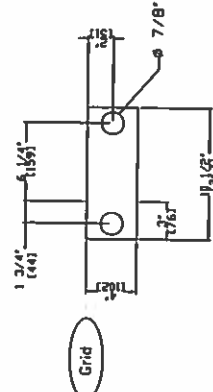
NOTES:
 -CONTRACTOR TO SUPPLY/INSTALL ANCHOR BOLTS ONLY.
 -CONTRACTOR TO PROVIDE PLYWOOD TEMPLATES FOR ANCHOR BOLT PLACEMENT.
 -ANCHOR BOLT DIAMETER FOR RESPECTIVE LOCATIONS AS INDICATED BY TEMPLATE.



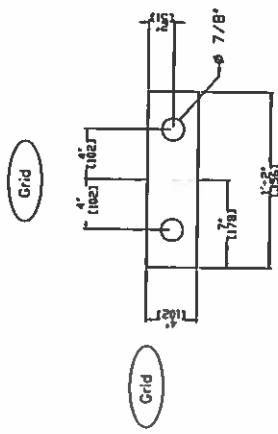
B ANCHOR BOLT TEMPLATE



D ANCHOR BOLT TEMPLATE



A ANCHOR BOLT TEMPLATE



C ANCHOR BOLT TEMPLATE