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1. Documents Required .1 Maintain at job site, one copy each of following:
 - .1 Contract drawings
 - .2 Specifications
 - .3 Addenda
 - .4 Reviewed shop drawings/submissions
 - .5 Change orders
 - .6 Other modifications to Contract
 - .7 Field test reports
 - .8 Copy of approved work schedule
 - .9 Manufacturer's installation and application instructions

 2. Site Conditions .1 Records of existing structures and geotechnical reports may be available for inspection at the offices of Public Works And Government Services Canada, 1713 Bedford Row, Halifax, N.S. This material is not necessarily up to date and is for information purposes only. It should be complemented by site visits and consultant with appropriate expertise.

 3. Work Schedule And Completion Dates .1 The contract completion date is April 12, 2022 for dredge area B and April 20, 2022 for dredge area A
 - .2 Prepare and submit to the *Engineer* within [5] days of notification of Contract award, [one] copy of the construction schedule [in the form of a bar chart] showing the dates for commencement and completion of each major activity of the work, including the work of subcontractors; dates for submissions, review and return of shop drawings, etc.; the dates of Substantial and Final Completion; and intended man hours of labour and equipment for each major item of work. If the schedule as submitted is unacceptable in any way, submit without delay a revised schedule satisfactory to the *Engineer*.
 - .2 The *Engineer* is to notify the Contractor in writing of acceptance of the Construction Schedule. Comply with the Construction Schedule at all times. If, for any reason, the Construction Schedule is not followed, immediately notify the *Engineer* of the change and submit a revised schedule for acceptance. Upon written acceptance by the *Engineer*, this schedule will become the Construction Schedule.
 - .3 Whenever required, give further written particulars concerning this schedule. The submission to and acceptance by the *Engineer* of the Contractor's Construction Schedule or the furnishing of details and particulars there to will not relieve the Contractor of any duties and responsibilities under the Contract.
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4. Measurement
Responsibilities .1 Notify *Engineer* sufficiently in advance of operations to permit required measurements for payment purposes.
5. Contractor's Use
of Site .1 Co-operate with users of existing facilities.
.2 Should interference's occur, take directions from *Engineer*.
.3 Do not unreasonably encumber site with materials or equipment.
.4 Move stored products or equipment which interfere with operations of *Engineer* or other Contractors.
.5 Obtain and pay for use of additional storage or work areas needed for operations.
.6 Comply with all regulations and authorities having jurisdiction over the work, whether on land or on water.
.7 Ensure no damage occurs to existing structures as a result of operations. Any said damage will be repaired at Contractor's expense.
.8 Provide temporary barriers and warning signs in location where work is adjacent to areas used by public.
6. Codes and
Standards .1 Perform work in accordance with National Building Code of Canada (NBC)2005 and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements will apply.
.2 Meet or exceed requirements of specified standards, codes and referenced documents. When a standard or code is outdated, the latest edition will supersede the referenced date.
.3 Observe and enforce construction safety measures as referenced in the Nova Scotia Occupational Health and Safety Act and its regulations. In the event of conflict between any provisions of above authorities the most stringent provision will apply.
7. Project Meetings .1 *Engineer* will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.
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8. Setting Out of Work
- .1 Do all detail surveys necessary for the work, including locating and maintaining working points, and establishing lines and elevations. Perform all layout work, and carefully preserve benchmarks, reference points and stakes.
 - .2 Provide such masts, scaffolds, batter boards, lines, straight edges, templates and other devices as may be necessary to facilitate layout, construction and inspection of the work. Whenever necessary, suspend work for such reasonable time as may be necessary to permit the *Engineer* to check or inspect any portion of the Work. The Contractor will not be allowed any extra compensation or time for completion because of this suspension of work.
 - .3 Elevations for the various grades and features of the specified works to be referenced and properly related to a benchmark, which will be approved by the *Engineer*.
 - .4 Verify all grades, lines, levels, and dimensions shown on the drawings and report any errors or inconsistencies to the *Engineer* before commencing work. Provide and maintain well built batterboards at all points to facilitate the progress of the work. Establish all other grades, lines, levels required to facilitate the work.
9. Existing Services
- .1 Before commencing work, establish location and extent of service lines in area of work and notify *Engineer* of findings.
 - .2 Submit schedule to and obtain acceptance from *Engineer* for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
 - .3 Where unknown services are encountered, immediately advise *Engineer* and confirm findings in writing.
10. Contract Documents
- .1 The drawings for the Work consist of all drawings listed in these "Plans And Specifications" marked "A" and any additional drawings issued at a later date by the *Engineer*.
 - .2 *Engineer* may furnish additional drawings to assist in proper execution of work. These drawings will be issued for clarification only. Such drawings will have same meaning and intent as if they were included with plans referred to in Contract Documents.
 - .3 The drawings indicate the extent and general dimensions of the work. Make all necessary measurements to ensure that the result of
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the work is in accordance with the intent. Pay for Municipal permits, per General Conditions "C".

.4 Verify all existing conditions in field prior to proceeding with work.

.5 .1 Contract Specifications:

.1 The general requirements and technical specifications are written solely for the General Contractor. They are organized into the NMS format of separate divisions and sections.

.2 Specification language is of the 'Short Form type' for example, where the word "provide" occurs, interpret it to mean "the contractor shall furnish all labour, material and equipment necessary to complete the work".

.3 This Specification and accompanying drawings are intended to describe and provide for a finished project. They are intended to be complementary, and what is called for by either will be as binding as if called for by both. The Contractor shall understand that the work herein described will be complete in every detail, notwithstanding that every item necessarily involved is not particularly mentioned, and Contractor will be held to provide all labour, materials and equipment necessary for the entire completion of the work and will not avail himself of any errors or omissions.

11. Permits and Regulations

.1 Apply for, obtain and pay for all necessary permits, approvals and other authorizations required for the work.

.2 Comply with all by-laws, ordinances and regulations of all authorities having jurisdiction.

12. Cutting, Fitting and Patching

.1 Obtain *Engineer's* approval before cutting, boring or sleeving, or excavating adjacent to load-bearing members.

13. Record of Construction

.1 As work progresses, maintain accurate records to show all deviations from the contract drawings, with particular reference to work which will be concealed. Prior to the inspection of the work for the issuance of the Final Certificate of Completion, provide the

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- Engineer* with one set of white prints of the drawings with all deviations shown neatly thereon.
- .2 Provide "as built" cross sections of any excavation, dredging or fill work.
14. Payment .1 Payment for all work under this contract to be according to section 01 29 00.
- .2 No separate payment will be made for work specified. The cost of this work is to be integrated from section 01 29 00 also refer to section 35 20 23, Part 1 General 1.3.
- .3 Dimensional changes as directed by the *Engineer* to suit existing conditions, but not resulting in additional work or materials, will not be considered as extra to the Contract.
15. Site Assessment .1 All parties tendering must visit the site of the work prior to submission of tenders and make themselves thoroughly acquainted with the site conditions, conditions of the existing objects to be removed, tides degree of exposure and all information necessary for the proper carrying out of the work covered by the drawings and this specification. Submission of tender will be deemed that the contractor is conversant with site conditions.
- .2 The *Engineer* will give no consideration whatsoever to any claim by the Contractor resulting from failure to have made all the necessary investigations prior to tendering.
16. Maintenance of Shipping .1 Liaise with the local port officials to coordinate activities such that any interference is minimized.
17. Cooperation & Assistance to Engineer .1 Co-operate with *Engineer* on inspection of work.
- .2 Provide assistance when requested.
- .3 Provide small motor boat with operator and sounding chain for *Engineer's* use when requested.
18. Datum .1 The datum referred to in this Specification is Chart Datum. Chart Datum is, by International Agreement a plane below which the tide will seldom fall. The Canadian Hydrographic Service has adopted the plane of the lowest normal tide (L.N.T.) as Chart Datum. As the rise, fall, and range of tides varies daily, the Canadian Tide and Current Tables, as issued by the Canadian Hydrographic Service, should be consulted for tidal predictions and other tidal information relating to the work.
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| 19. | <u>Contractor's Representative</u> | .1 | Continuously maintain on the site an authorized representative to whom communication may be addressed and who will be competent to speak for the Contractor in discussing work methods. |
| 20. | <u>Workers Compensation</u> | .1 | Contractor and all sub-contractors must be registered under the Workers Compensation Act and provide evidence of good standing. |
| | | .2 | At completion of Contract and before final payment is made, the Contractor will present to the <i>Engineer</i> a Letter of Certification from the Workers Compensation Board, showing that all required assessments are paid in connection with all trades. |
| 21. | <u>Laws, Standards Taxes and Fees</u> | .1 | Comply with all laws and standards governing all or any part of the work, pay all applicable taxes and pay for all permits and certificates required in respect of the execution of the work. Where variances exist between the requirements of agencies governing all or any part of the work, the most restrictive will govern, but in no instance will the standards established by the drawings and this Specification, which exceed such requirements, be reduced. |
| 22. | <u>Protection and Repair</u> | .1 | Repair any damage resulting from operations under this contract. |
| 23. | <u>Location of Equipment and Fixtures</u> | .1 | Location of equipment, fixtures or any appurtenances indicated are to be considered approximate. |
| 24. | <u>Inspection and Testing</u> | .1 | The <i>Engineer</i> may employ an Inspector and/or Testing Company to ensure work conforms with contract. |
| 25. | <u>Disposal of Debris</u> | .1 | Debris, including construction materials not incorporated in the work, oil products and containers, and other materials of this nature will be disposed of in suitable locations off the site. Disposal is the responsibility of the Contractor. |
| | | .2 | Material from the work will not be permitted to go adrift or otherwise become a menace to navigation. |
| 26. | <u>Existing Soils Conditions</u> | .1 | Any information pertaining to soils and all boreholes logs are furnished by the <i>Engineer</i> as a matter of general information only and borehole descriptions or logs are not to be interpreted as descriptive of conditions at locations other than those described by the boreholes themselves. |
| 27. | <u>Relics And</u> | .1 | Protect relics, antiquities, items of historical or scientific interest |
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- Antiquities such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.
- .2 Give immediate notice to *Engineer* and await written instructions before proceeding with work in this area.
- .3 Relics, antiquities and items of historical or scientific interest remain her Majesty's property.
28. Temporary Navigational Buoys
- .1 Contractor is to maintain temporary buoy's to mark the position of the outer end of the dredge area as construction proceeds. All buoy's are to meet the requirements of Canadian Coast Guard Standard TP968-1984 and be equipped with radar reflectors.
- .2 The Contractor shall coordinate the buoy installation with the local authorities.
- .3 The Contractor is responsible for all costs associated with the supply, installation and removal of all temporary navigational buoy's.

PART 2 – PRODUCTS

not applicable to this section

PART 3 – EXECUTION

not applicable to this section

-----END OF SECTION-----

PROJECT PARTICULARS

1. Description of Work
 - .1 The work under this contract involves the dredging of the channel at Toney River Harbour, Pictou County, NS. The contract will be for a two (2) year period for the spring dredge only, with optional 3rd year.
 - .2 The work includes but is not limited to:
 - .1 Mobilization and Demobilization
 - .2 Dredging of Area A to a dredge grade of -2.00m below chart datum. Loading, transportation, and disposal for the purpose of Beach Nourishment.
 - .3 Dredging of Area B to a dredge grade of -2.00m below chart datum. Loading, transportation, and disposal at designated location.
 - .4 Temporary breakwater alterations/reinstatements and access road construction for beach nourishment.

PROJECT MEASUREMENT

1. General
 - .1 This section details with the measurement of method to be used for payment purposes. Incidental items covered in the various sections of the Specification are to be allowed for in the pricing of each pay item.
 2. Measurement For Payment
 - .1 Mobilization/Demobilization shall constitute a lump sum for measurement purposes. Final payment for this item will only be made when all work is complete and all materials, equipment, and other facilities are removed, the site cleaned and left in a condition satisfactory to the Departmental Representative. **Include in this item all material and labour required to meet Rev.2018.01.25 of the Nova Scotia Temporary Workplace Traffic Control Manual.**
 - .2 Dredging of Area A will be measured by the cubic meter truck measure (CMTM) of Class "B" material removed. This unit price will include the construction and the removal of temporary causeways if required to gain access to the dredge site. This unit price will also include the loading, transportation, and disposal of dredge material on the east beach within
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boundaries as indicated on the project drawing to a maximum thickness of 0.4m.

- .4 Dredging of Area B will be measured by the cubic meter truck measure (CMTM) of Class “B” material removed. This unit price will include the construction and the removal of temporary causeways if required to gain access to the dredge site. This unit price will also include the loading, transportation, and disposal of dredge material at the designated containment cell located across Highway NS-6 as indicated on the drawings.

 - .4 Beach Nourishment Access shall constitute a lump sum for measurement purposes. This item should include all temporary alterations/reinstatements to the East Breakwater as well as temporary roads required to reach the beach nourishment boundaries as indicated on the project drawing. Final payment for this item will only be made when all work is complete and all materials, equipment, and other facilities are removed, the site cleaned and left in a condition satisfactory to the Departmental Representative.
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PART 1 - GENERAL

- 1.1 Related Work .1 Section 01 36 20: Special Procedures on Fire Safety Requirements.
- 1.2 Definitions .1 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2 Competent Person: means a person who is:
- .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the health and safety of persons in the workplace, and;
 - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
 - .3 Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .3 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .4 PPE: personal protective equipment
- .5 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.
- 1.2 Submittals .1 Submit to *Departmental Representative* copies of the following documents, including updates issued:
- .1 Site Specific Health and Safety Plan.
 - .2 Building Permit, compliance certificates and other permits obtained
 - .3 Reports or directions issued by Federal, Provincial inspectors or other Authority having jurisdiction.
 - .4 Formal Safety Inspection Reports
 - .5 Accident or Incident Reports
 - .6 WHMIS MSDS data sheets.
 - .7 Name of person(s) designated to perform full time health and safety site supervision.
 - .8 Name of person designated as Health and Safety Site Coordinator.
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- .9 Site Specific Traffic Control Plan
- .10 **Note: Contractor will be required to include Health and Safety requirements to protect their workers and the project site. These must include a Site Specific Health and Safety Plan including precautions and mitigations related to the hazard of contracting and spreading COVID-19 disease. A source of advice is found in the *Canadian Construction Association COVID-19 Standardized Protocols for All Canadian Construction Sites***

- .2 Medical Surveillance: Where prescribed by federal or provincial legislation and regulations and upon request by *Engineer*, obtain and submit certification of medical surveillance for site personnel prior to commencement of work.
- .3 Submit other data, information and documentation upon request as stipulated elsewhere in this section.
- .4 Submit above documents in accordance with the submittal - general requirements specified in Section 01330.

1.3 Compliance Requirements

- .1 Comply with the Occupational Health and Safety Act for the Province of Nova Scotia, and the Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code Part II, and the Canada Occupational Safety and Health Regulations made under Part II of the Canada Labour Code (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.
 - .1 The Canada Labour Code can be viewed at:
[www.http://laws.justice.gc.ca/en/L-2/](http://laws.justice.gc.ca/en/L-2/)
 - .2 COSH can be viewed at:
[www.http://laws.justice.gc.ca/eng/sor-86-304/ne.html](http://laws.justice.gc.ca/eng/sor-86-304/ne.html)
 - .3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada Ottawa, Ontario, K1A 0S9 Telephone (819)956-4800 (1-800-635-7943 Publication No. L31-85/2000 E or F)
- .3 Observe and enforce construction safety measures required by:

- .1 2005 National Building Code of Canada, Part 8;
- .2 Provincial Worker's Compensation Board;
- .3 Municipal statutes and ordinances.

- .4 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, *Engineer* 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 *Engineer* upon request.

1.4 Responsibility

- .1 Be responsible for safety of persons and property on work site and for protection of building employees and general public circulating adjacent to work operations to extent that they may be affected by conduct of Work.

- .2 Enforce compliance by workers and other persons granted access to work site with safety requirements of Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.5 Site Control and Access

- .1 Control work site and entry points. Grant and allow entry to only workers and other persons so authorized. Immediately stop non-authorized persons from circulating within construction areas and remove from site.

- .2 Implement procedures for granting permission to enter onto work site to all persons who require access. Procedures to include the provision of a site safety orientation session.

- .3 Delineate and isolate construction areas from other areas of site by use of appropriate means. Erect barricades, fences, hoarding and temporary lighting as required.

- .4 Erect signage at entry points and at other strategic locations around site, clearly identifying construction area(s) as being "off-limits" to non-authorized persons. Signage must be professionally made in both official languages or by use of well understood graphic symbols.
- .5 Secure site at night time as deemed necessary to protect site against entry.
- .6 Ensure persons granted access are fitted and wear appropriate personal protective equipment (PPE). Be responsible for the provision of such PPE to persons who require access to conduct work or perform inspections.
- .7 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm. Provide security guard where adequate protection cannot be achieved by other means.

1.6 Protection

- .1 Provide temporary facilities for protection and safe passage of building occupants, public pedestrians and vehicular traffic around and adjacent to work site.
- .2 Provide safety barricades, lights and signage on work site as required to provide a safe working environment for workers.
- .3 Carry out work placing emphasis on health and safety of public, building employees, site personnel and protection of the environment.
- .4 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 Engineer verbally and in writing.

1.7 Filing of Notice

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

1.8 Permits

- .1 Obtain permits related to project prior to commencement of work.
- .2 Obtain permits, licenses & compliance certificates, at appropriate times & frequency as stipulated by authorities having jurisdiction.

.3 Where particular permit or compliance certificate cannot be obtained at the required stage of work, notify *Engineer* in writing and obtain Engineer's approval to proceed prior to carrying out that portion of work.

.4 Post all permits on site. Submit copies to *Engineer*.

1.9 Hazard Assessments

.1 Implement and carry out a health and safety hazard assessment program as part of the work. Program to include:

.1 Initial hazard assessment carried out immediately upon notification of contract award and prior to commencement of work.

.2 On-going hazard assessments performed during the progress of work identifying new or potential health risks and safety hazards not previously known. As a minimum hazard assessments shall be carried out when:

.1 New sub-trade work, new subcontractor(s) or new workers arrive at the site to commence another portion of the work.

.2 The scope of work has been changed by Change Order.

.3 Potential hazard or weakness in current health and safety practices are identified by *Engineer* or by an authorized safety representative.

.2 Hazard assessments to be project and site specific, based on review of contract documents, site and weather conditions.

.3 Each hazard assessment to be made in writing. Keep copies of all assessments on site for duration of work. Upon request, make available to *Engineer* for inspection.

1.10 Project/Site Conditions

.1 The following are known or potential project related safety hazards at site:

.1 The work of this contract involves heavy equipment in a remote marine environment in adverse weather conditions (wind, wave agitation, ice, falling, etc.)

.2 Overhead power lines along the access road to the site.

.2 Obtain from *Departmental Representative*, copy of MSDS Data sheets of existing hazardous materials stored on site or being used by Facility and Tenant personnel in the course of their operations.

.3 Above lists shall not be construed as being complete and inclusive

of safety and health hazards encountered as a result of Contractor's operations during the course of work. Include above items into the hazard assessment program specified herein.

1.11 Safety Meetings

- .1 Prior to commencement of work attend health and safety meeting conducted by *Departmental Representative*. Have Contractor's foreman in attendance. Engineer will advise of time and location.
- .2 Provide site safety orientation session to all workers and other authorized persons prior to granting them access to work site. Brief persons on site conditions and on the minimum site safety rules in force at site.
- .3 Conduct site specific occupational health and safety meetings during the entire work as follows:
 - .1 Formal meetings on a minimum monthly basis
 - .2 Informal tool box meetings on a regular basis from a predetermined schedule.
- .4 Keep workers informed of anticipated hazards, on safety practices and procedures to be followed and of other pertinent safety information related to:
 - .1 Progress of work / changes in site and project conditions
 - .2 New sub-trades arriving on site and;
- .5 Record and post minutes of meetings. Make copies available to *Engineer* upon request.

1.12 Health and Safety Plan

- .1 Develop written site-specific Project Health and Safety Plan, based on hazard assessments, prior to commencement of work. Submit plan to Engineer within 14 calendar days of Contract Award date.
- .2 Health and Safety Plan shall contain the following three (3) parts:
 - .1 Part 1: List of individual health risks and safety hazards identified by hazard assessment(s).
 - .2 Part 2: List of specific measures to control or mitigate each hazard and risk identified in part one of Plan. Describe the engineering controls, personal protective equipment and safe work practices to be implemented and followed when performing work related to each identified hazard or risk.
 - .3 Part 3: Emergency Measures and Communications Procedures as follows:

- .1 Emergency Measures: on-site operating procedures, evacuation measures and emergency response to be implemented in the occurrence of an accident or incident. Procedures to be specific and relevant to identified hazards. Measures to complement and be integrated with Emergency Response Plans in place at site. Obtain information on existing emergency and evacuation plans from Engineer and incorporate appropriate data.
- .2 Communication Procedures:
 - .1 list of names and telephone numbers of designated official(s), to be contacted should an incident or emergency situation occur, including the following:
 - .1 General Contractor and all Subcontractors.
 - .2 Federal and Provincial Departments and local emergency resources organizations, as applicable to the hazards identified and type of accident or incident which might occur, in accordance with applicable laws and regulations.
 - .3 Officials from SCH, where work is carried out will provide list of names to be included.
 - .2 Procedures implemented at site to communicate and share information between workers, subcontractors, and General Contractor on work activities, and in particular those which might endanger workers and Facility employees.
 - .3 List of critical construction activities to be communicated with the Facility Manager and designated tenant representative(s) which could affect facility and tenant operations, or pose a risk to the health and safety of their employees and to the general public. Develop list in consultation with the *Engineer*.
- .3 Prepare Health and Safety Plan in a three column format, addressing the three parts specified above, as follows:

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

- .4 Develop Health and Safety Plan in collaboration with all subcontractors. Address all work and activities of subcontractors as they arrive on site. Immediately update Plan and submit to the *Departmental Representative*.
- .5 Implement, maintain and enforce compliance with requirements of the Health and Safety Plan until final completion of work and demobilization from site.
- .6 As work progresses, review and update Plan addressing additional health risks and safety hazards identified by on-going hazard assessments.
- .7 Submit revised versions of Plan to *Departmental Representative*.
- .8 Post a typed written copy, including all updates, of the Health and Safety Plan in a common visible location at work site.
- .9 Submission of the Health and Safety Plan, and updates, to the *Engineer* is for review and information purposes only. It's submission shall not be construed to imply approval by *Departmental Representative*, be interpreted as a warranty of being complete, accurate and legislative compliant and shall not relieve Contractor of his legal obligations for the provision Health and Safety on the construction project.

1.13 Safety
Supervision and
Inspections

- .1 Designate competent person or persons to be present on site at all times during work, responsible for supervising health and safety and conducting safety inspections of work site.
- .2 Assign responsibility, obligation and authority to such designated person(s) to stop and start work as deemed necessary for reasons of health and safety.
- .3 Provide names of designated individuals to *Departmental Representative*.
- .4 Cooperate with Health and Safety Site Coordinator responsible for the entire site or facility, should one be designated by *Departmental Representative*.
- .5 Conduct regularly scheduled safety inspections of work site as follows:

- .1 Informal Inspections: carry out on a minimum bi-weekly basis. Note deficiencies and remedial action taken in a log book or diary.
- .2 Formal Inspections: carry out on a minimum weekly basis. Use standardized safety checklist forms. Prepare written report for each formal inspection. Document deficiencies, remedial action needed and assign responsibility for rectification to appropriate subcontractor or worker.
- .6 Distribute monthly reports to subcontractors for their pursuance. Follow-up and ensure appropriate action and corrective measures are taken.
- .7 Maintain safety inspection documentation on site. Submit copies of formal inspection reports to *Engineer*.
- .8 All persons in Contractor's employ responsible for health and safety requirements specified in the Contract Documents to be competent in Occupational Health and Construction Safety as defined in the Provincial Occupational Health And Safety Act.

1.14 Training

- .1 Ensure that workers, subcontractors and other authorized persons granted access to site are properly trained and have been fully instructed, by a competent instructor, on:
 - .1 Safe operation of tools and equipment.
 - .2 Proper wearing and use of personal protective equipment (PPE) as applicable to the purpose and activities to be conducted on site.
 - .3 Safe work practices and procedures to be followed during the performance of their given work tasks or function on site.
 - .4 Site Conditions and minimum site safety rules provided through site orientation sessions.
- .2 Make training records readily available for review by *Engineer* upon request.
- .3 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise the *Engineer* verbally and in writing.

1.15 Minimum

- .1 Notwithstanding the requirement to abide by federal and provincial

Site Safety Rules

health and safety regulations, the following safety rules shall be considered minimum requirements at the work site and obeyed by all persons granted access:

- .1 Wear personal 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 activities, conditions, near-miss accidents, injuries and damages.
 - .3 Maintain site in tidy condition,
 - .4 Obey warning signs and safety tags.
 - .5 Brief persons of disciplinary protocols to be taken for non-compliance. Post rules on site.
- .2 The following actions or conduct by Contractor, workers and sub-contractors 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 *Engineer*:
- .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 *Engineer* 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 *Engineer*.
- .3 The final decision as to what constitutes a safety violation or non-compliance issue will be made by *Engineer*.
- .4 Non-Compliance Notifications may result in disciplinary measures taken as specified under the Non-Compliance Disciplinary Measures specified elsewhere in this section.
- .5 Brief workers on site safety rules and on the disciplinary measures

to be taken for violation or non compliance of such rules. Post such information on

1.16 Correction of Non-Compliance

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

1.17 Accident Reporting

- .1 Investigate and report incidents and accidents as outlined in Provincial Occupational Safety and Health Act and Regulations.
- .2 Investigate and immediately report to *Engineer* incidents and accidents which results, [or has the potential of resulting] in:
 - .1 Injuries requiring medical aid,
 - .2 Property damage in excess of \$5000.00,
 - .3 Interruption to building operations with potential loss to owner or client in excess of \$5000.00,
 - .4 Required notification to Workers Compensation Board or other regulatory agencies as stipulated by applicable regulations.
- .3 The term "medical aid" as used in above clause shall have the same meaning as defined in the Canadian Dictionary of Safety Terms - 1987 issue, from the Canadian Society of Safety Engineers (C.S.S.E) as follows:
 - .1 Medical Aid: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.

1.18 Hazardous Products

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

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| <u>1.19 Blasting</u> | .1 | Blasting or other use of explosives is not permitted [without prior written instructions from Engineer]. |
| | .2 | Do blasting operations in accordance with section [02325, 3.5 - Rock Removal]. |
| <u>1.20 Powder Actuated Devices</u> | .1 | Use powder actuated fastening devices only after receipt of written permission from <i>Engineer</i> . |
| <u>1.21 Posting of Documents</u> | .1 | Post documents indicated herein and as required by Authority having jurisdiction. |
| | .2 | Post other documents as specified herein, including: <ul style="list-style-type: none">.1 Site Specific Health and Safety Plan.2 WHMIS data sheets |
| <u>1.22 Records on Site</u> | .1 | Maintain on site copy of safety documentation as specified in this section and other safety related reports and documents issued to or received from authorities having jurisdiction. |
| | .2 | Make available to <i>Engineer</i> , or authorized safety representative, for inspection upon request. |
| <u>1.23 Non Compliance Notifications and Disciplinary Measures</u> | .1 | Immediately address and correct health and safety violations and non-compliance issues. |
| | .2 | In an effort to communicate the importance placed by SCH of stringently maintaining health and safety on the construction site, Engineer will institute on project a system of "Non-Compliance Notifications" issued to the General Contractor. The non-compliance notifications could lead to disciplinary measures imposed on the offending party and on the General Contractor depending on the frequency or severity of infractions. |
| | .3 | The system consists in the issuance of a "Non-Compliance Notification" by <i>Engineer</i> to the General Contractor whenever a worker, subcontractor or other person, granted access to the work site violates a site safety rule, or a health and safety requirement of the Contract or is non-compliant with applicable occupational health and safety laws and regulations. <ul style="list-style-type: none">.1 Each non-compliance notification issued is given a rating based on a three level classification system..2 Levels are graduated and progressive to reflect:<ul style="list-style-type: none">.1 The seriousness of the infraction(s) as viewed by SCH and by the Engineer and; |
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- .2 The degree of disciplinary measures which will be taken by SCH.

 - .4 The following describes the situations and disciplinary actions to be taken by NSPI dependent on the rating level given to a particular Non-Compliance Notification issued:
 - .1 Non-Compliance Notification-Level 1 rating:
 - .1 Situation: occurrence of a first time infraction by a person or party on site.
 - .2 Action: verbal warning to General Contractor, documented in SCH project files and copy sent to the General Contractor.

 - .2 Non-Compliance Notification-Level 2 rating:
 - .1 Situation:
 - .1 The second occurrence of a previous infraction by the same person or party on site or;
 - .2 Accumulation of several level one notifications for different infractions by the same person or party on site or;
 - .3 Non-action on the part of the Contractor or subcontractor to rectify non-compliance infractions previously identified in one or several level one notifications or;
 - .4 Violation or non observance of a Federal or Provincial safety Law or Regulation by subcontractor or Contractor or;
 - .5 Negligence by a person or party resulting in injury or major property damage.
 - .2 Action: written notice to General Contractor complete with an Order for immediate remedial action to be taken. Depending on the severity of the offence, Order may include the immediate removal of the offending person or party from site.

 - .3 Non-Compliance Notification-Level 3 rating:
 - .1 Situation:
 - .1 Continued and repeated non-compliance with health and safety requirements by the General Contractor or by subcontractor(s) or;
 - .2 The occurrence of a "serious accident" on site resulting in serious bodily injury or death.
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- .2 Action :
 - .1 Formal letter issued to General Contractor with an Order to "Immediately Stop Work" until so notified to proceed.
 - .2 Review and possible investigation by *Engineer* and SCH officials of all the non compliance incidences which have occurred or of the serious accident.
- .3 The term "serious accident", as used herein, shall have the same meaning as defined in the Canadian Dictionary of Safety Terms - 1987 issue from the Canadian Society of Safety Engineers (C.S.S.E).

-----END OF SECTION-----

1.1 REFERENCES

- .1 Canada Shipping Act, Transport Canada, 2001, amended 2019-05-10
- .2 Canadian Coast Guard Regulations, Department of Fisheries and Oceans Canada.
- .3 Canadian Environmental Impact Assessment Act, 2019, amended on 2020-08-11
- .4 Canadian Navigable Waters Act, 2019. Transport Canada
- .5 Fisheries Act, 1985, Fisheries and Oceans Canada, amended 2019-08-28
- .6 Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters, 1998
- .7 Migratory Birds Convention Act, 1994, Environment Canada, amended 2017-12-12
- .8 Nova Scotia – Environment Act, 1995, Amended 2018-02-15
- .9 Species at Risk Act, 2002, amended 2019-05-22
- .10 The Federal Policy on Wetland Conservation, 1991, Environment Canada
- .11 Transportation of Dangerous Goods Act, 1992, Transport Canada, amended 2017-12-13
- .12 Workplace Hazardous Materials Information System, Health Canada.

1.2 DEFINITIONS

- .1 Wetlands: land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands," and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.
 - .2 Surface watercourse: refers to the bed and shore of a river, stream, lake, creek, pond, marsh, estuary or salt-water body that contains water for at least part of each year.
 - .3 Invasive (or alien) species: refers to a species or subspecies
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introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.

- .4 Buffer zone: a vegetated land that protects watercourses from adjacent land uses. It refers to the land adjacent to watercourses, such as streams, rivers, lakes, ponds, oceans, and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.

1.3 TRANSPORTATION

- .1 Do not overload trucks when hauling dredge material. Secure contents against spillage.
- .2 Maintain trucks clean and free of mud, dirt and other foreign matter.
- .3 Trucking transporting dredge material will have watertight boxes.
- .4 Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the Work. Immediately clean any spillage and soils.
- .5 Before commencement of work, advise the Harbour Authority Representative of the existing roads and temporary routes proposed to be used to access work areas and to haul material to and from the site, including roads to the dredged material disposal site.

1.4 BEACH NOURISHMENT

- .1 Dredge material is to be placed at the designated disposal site adjacent to the east breakwater as outlined on the contract drawings.
- .2 Maintain present beach profile as much as possible when grading the dredge material at the designated disposal site.
- .3 Do not cover any existing vegetation with the deposited material at the designated disposal site.
- .4 Beach nourishment material, to be dredged from Area A only, must be clean coarse-grain sand, free of rocks and debris. All other material to be disposed of offsite at the disposal site.

1.5 DISPOSAL OF DREDGED MATERIAL

- .1 Material from the dredge area B will be disposed at the approved designated site located near 4901 NS-6, River John, NS, B0K 1N0.

- .2 The Marine Sediment Sampling Program reports are available but not required by the contractor as the dredge material has a designated location, see above.
- .3 Place and spread dredge material at the disposal site as directly by the Departmental Representative.
- .4 Control runoff of water containing suspended materials or other harmful substances in accordance with requirements of all federal, provincial and municipal authorities having jurisdiction.
- .5 Items such as rubber tires, bottles, cans and other debris or litter must be removed from the disposal site following regrading. Failure to remove such debris may constitute a littering offence under the Solid Waste Resource Management Regulations.

1.6 PETROLEUM, OIL
AND LUBRICANTS

- .1 Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.
 - .2 Do not place fuel storage tanks and store fuel or other petroleum products within a 30 meter buffer zone of watercourses and wetlands. Do not fuel or lubricate equipment within this 30 meter buffer zone. Obtain approval from Harbour Authority Representative of acceptable location on site for fuel storage and equipment service.
 - .3 Do not dump petroleum products or any other deleterious substances on ground or in the water.
 - .4 Be diligent and take all necessary precautions to avoid spills and contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.
 - .5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) overpack spill kit for containment and cleanup of spills.
 - .6 Maintain vehicles and equipment in good working order to prevent leaks on site.
 - .7 In the event of a petroleum spill, immediately notify the Harbour Authority Representative and the Canadian Coast Guard (CCG) at 1-
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800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.

1.7 DISPOSAL OF
WASTES

- .1 Do not bury rubbish, demolition debris and waste materials on site.
- .2 Dispose and recycle demolition debris and waste materials in accordance with Provincial Waste Management Regulations.
- .3 Do not dispose of hazardous waste, volatile materials (such as mineral spirits, paints, thinners etc...) and petroleum products into waterways, storm or sanitary sewers or in waste landfill sites.

1.8 WATER QUALITY

- .1 Conduct dredging of a watercourse in such a manner to limit turbidity and reduce sediment suspension in the water to an absolute minimum at all times.
 - .1 Maintain appropriate production speed and momentum of the dredging equipment. Make adjustments as required and as approved by the Harbour Authority Representative.
 - .2 Strategically position dredging equipment and barge and/or haul vehicles to avoid over the water swings of excavated material whenever possible.
 - .3 Restrict the amount of material dredged to the area and depth required for navigation.
 - .4 Avoid bottom stockpiling or side casting during dredging.
- .2 Where work may affect the water quality adjacent to water intake lines used by Lobster Holding Facilities, Fish Processing Facilities and other harbour users, schedule work in cooperation with the Harbour Authority Representative to minimize interference and impact to harbour users.
- .3 Visually monitor the water turbidity of the surrounding areas adjacent to the dredge area on a daily basis during the in-water work periods.
 - .1 Should excessive change occur in the turbidity of the water outside the work area, such as a distinct color difference; the work must stop and the Department of Fisheries and Oceans – Fisheries Protection Program (DFO-FPP) will be contacted at 902-426-7831 to determine if additional mitigation measures are required.

- .4 Do not washdown equipment within a 30 meter buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .5 If necessary, install effective sediment control measures before starting work to prevent the entry or re-suspension of sediment in the water body. Inspect sediment control measures regularly to ensure they are functioning properly. Make all necessary repairs if any damage occurs. Remove these control measures in a way that prevents the escape of settled sediment.

1.9 SOCIOECONOMIC
RESTRICTIONS

- .1 Abide by municipal and provincial regulations for any restrictions on work performed during the night time and on flood lighting of the site. Obtain applicable permits.
- .2 Place flood lights in opposite direction of adjacent residential and business areas.
- .3 Equip equipment and machinery with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.

1.10 BIRD AND
BIRD HABITAT

- .1 Become knowledgeable with and abide by the *Migratory Birds Convention Act (MBCA)* in regards to the protection of migratory birds, their eggs, nests and their young encountered on site and in the vicinity.
- .2 Minimize disturbance to all birds on site and adjacent areas during the entire course of the Work.
- .3 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.
- .4 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
- .5 Do not use beaches, dunes and other natural previously undisturbed areas of the site to conduct work.
- .6 Should nests of migratory birds in wetlands be encountered during work, immediately notify the Harbour Authority Representative for directives to be followed.

- .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.
- .2 Minimize work immediately adjacent to such areas until nesting is completed.
- .3 Protect these areas by following recommendations of Canadian Wildlife Service.

1.11 FISH AND
FISH HABITAT

- .1 Be aware of the risk for contamination of the fish habitat at the site as a result of alien species being introduced in the water.
- .2 To minimize the possibility of fish habitat contamination, all construction equipment which will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and alien species.
 - .1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.
- .3 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
- .4 Conduct cleaning and washing operations as follows:
 - .1 Scrape and remove heavy accumulation of mud and dispose appropriately.
 - .2 Wash all surfaces of equipment by use of a pressurized fresh water supply.
 - .3 Immediately follow with application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
 - .4 Check and remove all plant, animal and sediment matter from the all bilges and filters.
 - .5 Drain standing water from equipment and let fully dry before use.
 - .6 Upon removal from the water, drain standing water from equipment and let fully dry before removal off the site.
- .5 Do not perform cleaning and washdown within a 30 meter buffer zone of a wetland, watercourse or other identified environmentally sensitive area.

- .6 Record of Assurance Logbook:
 - .1 Maintain an on-going log of past and present usage and washdowns of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
 - .2 Write data in a hard cover bound logbook,
 - .3 Include the following:
 - .1 Date and location where equipment was previously used in a watercourse or wetland;
 - .2 Type of work performed.
 - .3 Dates of washdown for each piece of equipment;
 - .4 Cleaning method and cleaning agent(s) used.
- .7 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to Harbour Authority Representative for review.
- .8 Abide by requirements and recommendations of the Federal Department of Environment and the Department of Fisheries and Oceans - Habitat Management Division in cleaning and washdown of equipment.

1.12 AIR QUALITY

- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
- .2 Apply dust control measures to roads, parking lots and work areas.
- .3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.
- .4 Do not use oil or any other petroleum products for dust control.

1.13 FIRES

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

1.14 ARCHAEOLOGICAL

- .1 All construction personnel are responsible for reporting any unusual materials unearthed during construction to the construction supervisor. If the find is believed to be an archaeological resource, the construction supervisor will immediately stop work in the vicinity of the find and notify his/her immediate supervisor.

- .2 If an archaeological and/or historically significant item is discovered during excavation, work in the area will be stopped and Harbour Authority Representative will be contacted.

PART 1 – GENERAL

- 1.1 Section Includes
- .1 Fire Safety Requirements
 - .2 Hot Work Permit
 - .3 Existing Fire Protection and Alarm Systems
- 1.2 Related Work
- .1 Section 01 35 30: Health and Safety
 - .2 Section 01 36 40: Special Procedures on Lockout Requirements
- 1.3 References
- .1 FCC No. 301-June 1982 Standard for Construction Operations.
 - .2 FCC No. 302-June 1982 Standard for Welding and Cutting.
- 1.4 Definitions
- .1 Hot Work defined as:
 - .1 Welding work
 - .2 Cutting of materials by use of torch or other open flame devices
 - .3 Grinding with equipment which produces sparks.
- 1.5 Submittals
- .1 Submit copy of Hot Work Procedures, to *Engineer* for review, within [14] calendar days after contract award.
 - .2 Include sample of Hot Work Permit.
 - .3 Submit above documents in accordance with the submittal - general requirements.
- 1.6 Fire Safety & Hot Work Requirement
- .1 Implement and follow fire safety measures during Work. Comply with following:
 - .1 National Fire Code, 2005
 - .2 Fire Protection Standards FCC 301, Standard for Construction Operations and FCC 302, Standard for Welding and Cutting as issued by the Fire Protection Services of Human Resources Development Canada. Federal and Provincial Occupational Health and Safety Acts and Regulations.
 - .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, *Engineer* will advise on the course of action to be followed.
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- .3 FCC standards, noted above, may be viewed at the Regional Fire Protection Services' office (previously known as the Fire Commissioner of Canada) located at 99 Wyse Road, 8th floor, Dartmouth, NS; telephone: (902)-426-6053.
- .4 Hot Work Requirements:
 - .1 Obtain Engineer's written Authorization to Proceed for the performance of Hot Work on site as may be required in the course of Work.
 - .2 To obtain authorization submit to Engineer for review:
 - .1 Contractor's Hot Work Procedures to be followed on site in accordance with clause 1.8 below.
 - .2 Type of work and frequency of situations which will require Hot Work.
 - .3 Upon confirmation that effective fire safety measures will be implemented for hot work, Engineer will grant Authorization to Proceed.
 - .4 In most cases, Engineer will issue only one written authorization covering the entire construction project and duration of work. However in some cases, depending on the nature or phasing of work, the quantity of various trades needing to perform welding and cutting on site, or other deemed situation, *Engineer* might designate certain portions of the work as separate entities, each entity requiring individual written authorization to proceed. Follow Engineer's directives in this regard.
- .5 Do not perform any Hot Work until receipt of *Engineer's* written Authorization to Proceed.
- .6 In tenant occupied facilities, coordinate performance of Hot Work with Facility Manager through the *Engineer*. When directed perform Hot Work during non-operative hours when Facility is vacant of employees. Follow *Engineer's* directives in this regard.

1.7 Conformance

- .1 Ensure that Hot Work Procedures, as established for project and agreed upon with *Engineer*, are stringently followed. Enforce use and compliance by all workers.
- .2 Brief all workers and subcontractors on Hot Work Procedures and Permit system,
- .3 Failure to comply with the established hot work procedures may result in the issuance of a Non-Compliance Notification at *Engineer's* discretion with possible disciplinary measures imposed.

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- 1.8 Hot Work Procedures
- .1 Develop Hot Work Procedures, to be followed when Hot Work is required as part of the work.
 - .2 Describe safe work practices and sequence of activities to be followed on site by Contractor and workers to minimize the potential occurrence of a fire resulting from Hot Work.
 - .3 Hot Work Procedures to include:
 - .1 Requirement to perform hazard assessment of the site or immediate work area, based on type and extent of Hot Work required, in accordance with Hazard Assessment and Safety Plan requirements. Carryout hazard assessment for each hot work event.
 - .2 Use of a Hot Work Permit system, issued by an authorized person in Contractor's employ, for each event when Hot Work is required, granting permission to carryout hot work.
 - .3 Provision of a designated person(s) to carryout a Fire Safety Watch for a minimum of [30] minutes immediately upon completion of the hot work.
 - .4 Procedures to comply with fire safety codes and standards specified herein and occupational health and safety regulations.
 - .5 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the Hot Work Procedures applicable to this contract.
 - .6 Include within procedures the step by step process on how to prepare and issue the Hot Work Permit.
 - .7 Hot Work Procedures to be in typewritten format, listing step by step procedures and worker instructions, clearly establishing and allocating responsibilities of:
 - .1 Worker(s),
 - .2 Designated person authorized to issue the Hot Work Permit,
 - .3 Fire Safety Watcher,
 - .4 Subcontractors and Contractor.
- 1.9 Hot Work Permit
- .1 Develop "Hot Work Permit" form in typewritten format.
 - .2 Hot Work Permit form to include, as a minimum, the following
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data:

- .1 Project name and project number;
- .2 Building name, address and specific floor, room or area where hot work will be performed;
- .3 Date when permit issued
- .4 Description on type of hot work to be carried out;
- .5 Special precautions required, including type of fire extinguisher needed;
- .6 Name and signature of authorized person, designated by Contractor, to issue the permit.
- .7 Name of worker(s) (clearly printed) to which the permit is being issued.
- .8 Time duration of permit (not to exceed 8 hours) indicating "Start" time & date and "Completion" time & date when Hot Work permit will be in effect.
- .9 Worker signature with date and time when hot work terminated.
- .10 Specified period of time requiring Safety Watch.
- .11 Name and signature of person designated as Fire Safety Watcher, complete with time & date when safety watch terminated, certifying that the surrounding area was under his continual watch and inspection for the minimum time period specified in Permit and commenced immediately upon the completion of Hot Work.

.3 Industry Standard forms shall only be used if all data specified above is included on form.

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

1.10 Fire Protection and Alarm Systems

- .1 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut-off, unless approved by *Engineer*.
 - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than fire fighting.
- .3 Costs incurred, from the fire department building owner (and tenants), resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress

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| 1. | <u>Access</u> | .1 | Provide and maintain adequate access to project site. |
| | | .2 | If authorized to use existing roads or structures for access to project site, maintain such roads for duration of Contract and make good, any damage resulting from Contractor's use of roads. |
| | | .3 | The contractor is to maintain full access to the work site. Should a court injunction be required ordering a person or group to refrain from impeding access to the site, such as a demonstration, picketing or union action, then obtaining the injunction and any associated costs will be considered incidental to the contract. Any delays associated with such activity will be considered incidental to this contract. |
| 2. | <u>Contractor's Site Office</u> | .1 | Site office trailer not required. |
| | | .2 | Keep one up-to-date copy of contract documents, bulletins and other materials on site. |
| | | .3 | Washroom facilities not required in the office. Provide outside sanitary facilities to approval. |
| | | .4 | Maintain in clean condition. |
| 3. | <u>Engineer's Site Office</u> | .1 | Site office trailer not required. |
| 4. | <u>Storage Sheds</u> | .1 | Provide adequate weather tight sheds with raised floors, for storage of materials, tools and equipment which are subject to damage by weather. |
| | | .2 | Contractor to make his own arrangements for on-site storage areas. |
| 5. | <u>Sanitary Facilities</u> | .1 | Contractor to provide sanitary facilities for work force in accordance with governing regulations and ordinances. |
| | | .2 | Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition. |
| 6. | <u>Parking</u> | .1 | Contractor to make arrangements to provide parking space for work force. |
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| 7. | <u>Power</u> | .1 | Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances. |
| | | .2 | Install temporary facilities for power such as pole lines and cables to approval of local power supply authority. |
| 8. | <u>Water Supply</u> | .1 | If Contractor elects, arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances. |
| 9. | <u>Barricades</u> | .1 | Provide and maintain sufficient barricades, fencing, notices, warning signs, light signals, etc. for the protection of adjoining property and to warn others and workmen engaged on the job of the dangers caused by the work. |
| | | .2 | Types and location of barricades, etc. to be in accordance with local regulations and to the satisfaction of <i>Engineer</i> . |
| | | .3 | The presence of such barricades, lights, etc. shall not relieve the Contractor of the responsibility for any damages. |
| 10. | <u>Security</u> | .1 | Contractor to make his own arrangements for security of his equipment, materials, damages resulting from fire and theft. |
| 11. | <u>Site Signs and French Notices</u> | .1 | Signs and notices for safety or instruction to be in English and languages, or commonly understood graphic symbols. |
| | | .2 | Only Project Identification and Consultant/Contractors signboards and notices for safety or instruction are permitted on site. |
| | | .3 | Format, location and quantity of site signs and notices to be accepted by <i>Engineer</i> . |
| 12. | <u>Removal of Temporary Facilities.</u> | .1 | Remove temporary facilities from site when directed by <i>Engineer</i> . |
| | | .2 | When project is closed down for a period of time, keep temporary facilities operational until no longer required by <i>Engineer</i> . |
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1. Record Drawings
 - .1 *Engineer* will provide two sets of white prints for record drawing purposes.
 - .2 Maintain project record drawings and accurately record deviations from contract documents caused by site conditions and changes ordered by *Engineer*.
 - .3 Mark changes in red coloured ink.
 - .4 Record following information:
 - .1 Elevations of various elements in relation to Chart Datum.
 - .2 Field changes in dimensions and details.
 - .3 Changes made by Change Order.
 - .5 At completion of project and prior to final inspection, neatly transfer notations to second set and submit both sets to *Engineer*.
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PART 1 – GENERAL

- 1.1 General
- .1 Conduct cleaning and disposal operations to comply with ordinances and antipollution laws.
 - .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
 - .3 Prevent accumulation of waste which create hazardous conditions.
- 1.2 Cleaning During Construction
- .1 Maintain the work, at least on a daily basis free from accumulations of waste material and debris.
 - .2 Provide on-site containers for collection of waste materials, and debris.
 - .3 Remove waste materials, and debris from site.
 - .4 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet concrete or newly painted surfaces.
- 1.3 Final Cleaning
- .1 In preparation for acceptance of the project on an interim or final certificate of completion perform final cleaning.
 - .2 Remove grease, dust, dirt, stains, and other foreign materials from finished surfaces

PART 2 – PRODUCTS

not applicable to this section

PART 3 – EXECUTION

not applicable to this section

-----END OF SECTION-----

PART 1 – GENERAL

1.1 Definitions

- .1 Dredging: excavating, transporting and disposing of underwater materials.
- .2 Material: loose or shale rock, silt, sand, quick sand, mud, shingle, gravel, clay, sand, gumbo, boulders, hardpan, debris or solid rock of any size requiring drilling and blasting or hydraulic splitting to facilitate removal.
- .3 CMTM: cubic meters truck measurement.
- .4 Debris: pieces of wood, wire rope, scrap steel, pieces of concrete and other waste materials.
- .5 Grade: plane above which material is to be dredged.
- .6 Estimated quantity, volume of material calculated to be above sub-grade and within specified side slopes unless otherwise specified.
- .7 Side slope: inclined surface or plane from grade at side limit of dredging area to intersect original ground line outside of side limit and to be expressed as ratio of horizontal to vertical.
- .8 Chart Datum: by international agreement, a plane which the tide will seldom fall. The Canadian Hydrographic Services has adopted the plane of the Lowest Normal Tide (LNT) as Chart Datum. As the rise, fall and ranges of tides varies daily, The Canadian Hydrographic Services should be consulted for tidal prediction and other tidal information relating to the work.

1.2 Description of Work

- .1 Work under this section covers the following: Maintenance dredging area of material to lines and grades as shown on drawing.
- .2 Dredge limits and estimated volumes are based on historical dredging and are subject to change pending completion of a hydrographic survey once ice conditions permit.

1.3 Measurement Procedures

- .1 Dredging and site preparation will be measured in accordance with Section 01 29 00.
- .2 Only material excavated above the grade plane and within side slopes indicated or specified will be measured.
- .3 Materials disposed of without written approval of dumpsite will not be measured for payment.

- .4 Material removed and dumped in the absence of the owner's inspector will not be considered for payment.
- .5 There will be no additional payment for delays incurred as a result of weather conditions.
- .6 There will be no additional payment for delays caused by vessel traffic in and out of the harbour.
- .7 There will be no additional payment for down time.
- .8 The contractor will adhere to the schedule and take immediate action to correct any shortfall, by effectively altering existing dredging operations or mobilizing other equipment. The engineer is to be notified of the corrective action to be taken.

1.4 Regulatory Requirements

- .1 Comply with municipal, provincial and national codes and regulations relating to project including the provisions of the Canadian Environmental Assessment Act Permit issued for this project. In any case of conflict or discrepancy, the more stringent requirements will apply.
- .2 Meet or exceed requirements of specified standards, codes and referenced documents.
- .3 Mark floating equipment with lights in accordance with Regulations for the Prevention of Collisions, as required by Transport Canada.
- .4 Contractor will be required to obtain prior approval from applicable regulatory agencies for any dredging outside specified dredging limits.

1.5 Scheduling

- .1 Submit to Small Craft Harbours (SCH), within 1 week after award of Contract, schedule of work including time periods during which each operation involved in Work will be undertaken. At time of submission of schedule, meet with SCH to review schedule.
- .2 Adhere to schedule and take immediate action to correct any slippage by effectively altering existing dredging operations or mobilizing other equipment. Notify SCH of corrective action to be taken.

1.6 Interference to Navigation

- .1 Be familiar with vessel movements and fishery activities in area affected by dredging operations. Plan and execute work in manner that will not interfere with fishing operations, marina operations or general activities on the river.

- .2 Keep District Manager, Canadian Coast Guard, Fisheries and Oceans, informed of dredging operations in order that necessary Notices to Mariners will be issued.
- 1.7 Datum, Water Gauges and Targets .1 Elevations / Soundings used in this specification and contract drawings are in metres referred to chart datum.
- 1.8 Inspection of Site .1 Contractor should visit the work site to become thoroughly familiar with extent and nature of work and conditions affecting work before tendering.
- 1.9 Site Information .1 Results of prior soundings / dredging are available for inspection upon request. It should be noted that this information may differ from site condition. Take this into consideration when submitting tender.
- 1.10 Survey Requirements .1 Contractor to provide, survey vessel, equipment and crew to set up and maintain control for location of dredge limits and to sound areas immediately after dredging to verify that grade depth has been attained.
- .2 Contractor to redredge as necessary to remove all material within dredge areas which is found to be above grade.
- 1.11 Submissions .1 Certificates
.1 Provide all copies of all necessary permits and licenses required to carry out the work.
- .2 Methodology:
.1 Provide methodology for carrying out the work.
- PART 2 – PRODUCTS NOT APPLICABLE
- PART 3 - EXECUTION
- 3.1 General .1 Mark floating equipment with lights in accordance with International Rules of Road and maintain radio watch on board.
- .2 Lay out work from bench marks and base lines established by Engineer. Be responsible for accuracy of work relative to established bench marks. Provide and maintain electronic position fixing and distance measuring equipment, laser transits and such other equipment as normally required for accurate dredging control.
- .3 Establish and maintain water level gauges tide boards in order that

proper depth of dredging can be determined. Locate gauges tide boards so as to be clearly visible.

- .4 Establish and maintain on-land targets for location and definition of designated dredge area limits. Targets to be suitable for control of dredging operations and locating soundings. Remove targets on completion of work.
- .5 Dredge area to grade depths indicated on attached plan.
- .6 Dredge side slope to allow material to freely fall inwards to form natural side slope.
- .7 Use extreme caution when dredging adjacent to existing structures. Damages are to be repaired at the contractor's expense.
- .8 Remove materials above specified grade depths, within limits indicated. Material removed from below sub grade depth or outside specified area or side slope is not part of work.
- .9 Remove shoaling which occurs as result of work. Once dredged, maintain dredge area grade.
- .10 Remove material cast-over on surrounding area and dispose of it as dredged material. Do not cast-over material unless authorized by Engineer.
- .11 Immediately notify *Departmental Representative* upon encountering object which might be classified as obstruction. Bypass object after clearly marking its location and continue work.
- .12 It will be the contractor's responsibility to gain access to the dredge area. The construction of causeways, roads, etc., will be at the contractor's expense and will be removed at the completion of the project. Any derricks, power lines, etc., which will require removal will be done so at the Contractor's expense and will be replaced to the satisfaction of the *Departmental Representative*. Contractor to advise the *Departmental Representative* of his proposed method to carry out dredging and disposal of the material.

3.2 Disposal of
Dredged Material

- .1 Disposal of dredged material will be carried out as outlined in section 01 35 44 Environmental Protection Procedures for Marine Work – part 1.4.
- .2 All material deposited on private or public roads or properties in vicinity of site or as a result of trucking material to the dumpsite will be removed by the contractor at no additional cost to the

- owner.
- .3 Dredge material will be disposed of in the designated dumpsite.
- 3.3 Dredging in Vicinity of Structures
- .1 Do not dredge material from areas lying within 1.5 m of existing structure unless authorized by the *Departmental Representative*.
- .2 ***The contractor is responsible to lay down a protective membrane between machinery and all asphalt / concrete surfaces. Used conveyer belt would be considered acceptable. Confirm with S.C.H. which method of protection is to be used.***
- .3 The contractor is to minimize turning and tracking on all surfaces including concrete deck and asphalt surfaces. Any damages occurred during the dredging operations will be paid for by the contractor.
- .4 Keep all dredging equipment a minimum of 300mm away from wheelguards. Any damages occurred during the dredging operations will be paid for by the contractor.
- .5 Use extreme care when dredging adjacent to existing structures. Any damage to these structures caused by dredging closer than specified to be repaired at Contractor's expense. In completing repairs, new materials are to be used. All materials and work performed to be approved by the *Departmental Representative*.
- 3.4 Final Dredge Grade
- .1 The contractor is to verify the final grade in the dredge area by an acceptable method.
- .2 If, as result of incomplete work, additional verification of depths by sounding or sweeping becomes necessary, additional costs involved shall be paid by Contractor.
- .3 Dredge area to lines and grades specified as shown on the contract drawings. Material removed from outside specified limits is not considered part of the work and will not be measured for payment.
- 3.5 Co-operation and Assistance to Engineer
- .1 Co-operate with the *Departmental Representative* on inspection of work and provide assistance requested.
- .2 On request of the *Departmental Representative*, furnish use of such boats, equipment, labour and materials forming ordinary and usual part of dredging plant as may be reasonably necessary to inspect and supervise work.
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