

STANDARD SPECIFICATIONS

June 29, 2021

Location, New Brunswick

Typical for all Projects

Department of Transportation and Infrastructure
Buildings Division

These standard specifications are applicable to all projects tendered by the Department of Transportation and Infrastructure - Buildings Division. These specification sections shall be read in conjunction with the "Project Specific Specifications" issued with the tender package and shall form part of the "Contract Documents".

Address all inquiries to:

The Contact Information as Described on the "Project Specific Specifications" cover sheet.

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END OF SECTION

PART 1 **GENERAL**

1.1 **GENERAL NOTE**

- .1 Please take note of the revisions and the limits of coverage required which vary depending on project tender value.
- .2 Provide proof of all insurances within seven days of contract award.

1.2 **INSURANCE REQUIREMENTS**

- .1 The following requirements apply to all insurances required for this contract.
- .2 All insurances shall be negotiated for, procured from, and the premium paid to a Canadian resident agent of an Insurance Company licensed to do business in the Province of New Brunswick.
- .3 Provide insurance that is specific to this contract only.
- .4 Course of Construction (Builder's Risk) insurance is required only for projects with a tender value over \$100,000.00.
- .5 All insurances required for this project:
 - .1 General liability insurance as detailed below (including wrap-up liability coverage where applicable) shall remain in force until Certificate of Final Completion. Insurance shall not be amended, cancelled or allowed to lapse without thirty (30) days prior notice to the Owner, Engineer - Architect.
 - .2 Course of Construction (Builder's Risk) insurance, if required as per 1.2.4, shall remain in force until issuance of substantial completion Insurance shall not be amended, cancelled or allowed to lapse without thirty (30) days prior notice to the Owner, Engineer - Architect.
- .6 For all projects, provide a Certificate of Insurance incorporating these requirements along with a detailed list of all exclusions from coverage for this contract. The contractor is not required to carry coverage for the following:
 - .1 Asbestos
 - .2 Cyber Risk
 - .3 Mold
 - .4 Terrorism

1.3 PART A GENERAL LIABILITY

- .1 For projects with a tender value of \$2,000,000.00 or less. The Contractor shall, at his own expense, provide and maintain a Comprehensive General Liability Insurance Policy in the name of the Contractor and Her Majesty the Queen in Right of the Province of New Brunswick for a limit of not less than \$2,000,000.00 inclusive for bodily injury, including death and property damage. The deductible is not to exceed \$5,000.00.
- .2 Such Insurance shall include:
 - .1 Blanket Contractual.
 - .2 Cross Liability Clause.
 - .3 Contingent Employers Liability.
 - .4 Confirmation of Completed Operations and product liability.
 - .5 Non-Owned Automobile.
 - .6 Property Damage on an Occurrence Basis.
 - .7 Personal Injury.
 - .8 Contractor's Protective Liability.
- .3 The certificate must identify all items detailed above in sub-section 1.3.2. Alternatively, the insurance company can submit a separate letter (on letterhead) or state on the certificate the following: Certificate is issued in compliance with the requirements of Insurance Schedule "E" (Section 00 73 17) of the Standard Specification Document as issued by the Department of Transportation and Infrastructure - Buildings Division.
- .4 For projects with a tender value in excess of \$2,000,000.00 the limit must be increased to not less than \$5,000,000.00 and the deductible is not to exceed \$10,000.00.
 - .1 Such insurance shall also include wrap-up liability coverage.

1.4 PART B COURSE OF CONSTRUCTION INSURANCE (BUILDERS RISK)

- .1 The Contractor shall, at his own expense, provide and maintain a "Contractor's Course of Construction (Builder's Risk)" Insurance during the term of the contract and it shall incorporate at least, the following features:
 - .1 The Owner, Her Majesty the Queen in Right of the Province of New Brunswick, the Contractor and all Sub-Contractors as named assured and incorporating the Insurers' Waiver of Subrogation against any of such named assured.

- .2 Coverage for the full value of the contract.
- .3 A debris removal clause.
- .4 Coverage may exclude cost of making good faulty workmanship, construction or design but this execution shall not apply to damage resulting from such faulty workmanship, construction or design.
- .5 Coverage shall be "Broad Form" on I.B.C. Form 4042 and I.B.C. Form 4047 or equivalent to the full value of the contract.
- .6 Fire Insurance to a total of no less than eighty percent (80%) of the total value of the work done and material delivered to the site, payable to the Owner and Contractor as their respective interests may appear.
- .7 Automatic reinstatement clause.
- .8 The cost of any deductible shall be borne by the Contractor.
- .9 Loss payable shall be made to the Owner and the Contractor as their interest may appear.
- .10 Special endorsement to cover existing structures.

1.5

PART C SPECIAL EQUIPMENT INSURANCE

- .1 The Department further reserves the right to require the Contractor to insure his plant and equipment relating to this contract and file with the Department, evidence that such Insurance is in force, and for such amount or amounts as the Department may deem to be adequate.

END OF SECTION

PART 1 **GENERAL**

1.1 **REFERENCE**

- .1 This document is referred to as the Supplementary General Conditions and marked "C" in the Articles of Agreement.

1.2 **DEFINITIONS**

- .1 **ENGINEER - ARCHITECT:**
 - .1 Section 1 Subsection 1(a) of the General Conditions "B" shall be amended and revised as follows:
 - .1 "Engineer - Architect" means the Assistant Deputy Minister, Buildings Division, Department of Transportation and Infrastructure, Province of New Brunswick or his designated representative.
 - .2 The letters "HPB" when used in this document mean "HIGH PERFORMANCE BUILDINGS".

1.3 **EMPLOYMENT**

- .1 In the employment of persons on this project, there shall be no discrimination or harassment based on grounds listed in the New Brunswick Human Rights Act as follow: age, marital status, family status, creed or religion, physical disability, mental disability, race, colour, ancestry, place of origin, national origin, social condition, political belief or activity, sexual orientation gender identity or expression, and sex (including pregnancy).

1.4 **CONTRACTOR'S SUPERINTENDENT**

- .1 Further to the requirements of Section 23 of the General Conditions "B", the Contractor shall not change a superintendent without the written consent of the Engineer-Architect.

END OF SECTION

PART 1 **GENERAL**

1.1 **FAIR WAGE REQUIREMENTS**

- .1 Prospective Bidders are reminded that the successful Bidder will be required to pay wages equal to or greater than those listed in Regulation 2007-34 under the Employment Standards Act.
- .2 A copy of Regulation 2007-34 more commonly referred to as the Fair Wage Schedule, "Minimum Wage for Categories of Employees in Crown Construction Work Regulation," may be obtained from the Queen's Printer or the Department of Transportation and Infrastructure - Buildings Division on request.
- .3 The successful Contractor will be required to post a copy of the Fair Wage Schedule on the construction site in accordance with Section 11(2) of the Employment Standards Act.

END OF SECTION

PART 1 **GENERAL**

1.1 **GENERAL**

- .1 All articles in this Section are "STANDARD GENERAL REQUIREMENTS" to bidders. Refer also to Project Specific Specifications document Section '01 00 01 - "PROJECT SPECIFIC GENERAL REQUIREMENTS".

1.2 **CODES**

- .1 Perform work in accordance with the current National Building Code of Canada (NBCC) adopted by the Province of New Brunswick and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.

1.3 **DOCUMENTS REQUIRED**

- .1 Maintain at job site, one copy of each of the following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Set of documents for recording changes or deviation from drawings.
 - .5 Reviewed shop drawings.
 - .6 Change orders.
 - .7 Modifications to Contract.
 - .8 Field test reports.
 - .9 Copy of approved work schedule.
 - .10 Manufacturers' installation and/or application instructions.

- .11 Bonds (when applicable).
- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Maintain record documents in clean, dry and legible conditions. Do not use record documents for construction purposes.
- .4 Keep record documents and samples available for inspection by Engineer-Architect.
- .5 Unless otherwise indicated in the PROJECT SPECIFIC SPECIFICATIONS, the Department of Transportation and Infrastructure – Buildings Division will provide a maximum of 10 sets of tender documents for contract administration purposes to the winning tender. These will be sent to the winning tender's expense.
- .6 Engineer-Architect must have access at all time to site office, all tender documents & all documentation related to the project.

1.4 CUTTING AND PATCHING

- .1 Approvals
 - .1 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of any element of Project.
 - .2 Integrity of weather-exposed or moisture-resistant elements.
 - .3 Efficiency, maintenance, or safety of any operational element.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of Owner or separate contractor.
- .2 Inspection
 - .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
 - .2 After uncovering, inspect conditions affecting performance of work.
 - .3 Beginning of cutting or patching means acceptance of existing conditions.
- .3 Execution
 - .1 Perform cutting, fitting, and patching including excavation and fill, to complete the Work.
 - .2 Remove and replace defective and non-conforming work.

- .3 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical work.
- .4 Perform work to avoid damage to other work.
- .5 Prepare proper surfaces to receive patching and finishing.
- .6 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces. When possible coordinate with the Department of Transportation and Infrastructure - Buildings Division Project Manager.
- .7 Cut rigid materials using power saw or core drill. Pneumatic or impact tools not allowed.
- .8 Restore work with new products in accordance with Contract Documents.
- .9 Fit work airtight, weatherproof and also as detailed and as directed and/or described by Engineer - Architect to pipes, sleeves, ducts, conduit, any and all other penetrations through surfaces.
- .10 At penetration of fire-rated wall, ceiling, or floor construction, completely seal voids with fire-rated and/or fire-resistant material, specified to thickness of construction element as required for fire rating as per manufacturers written instructions.
- .11 Refinish surfaces to match adjacent finishes; for continuous surfaces, refinish to nearest intersection or as directed by Engineer - Architect; for an assembly, refinish entire unit.

1.5 PROJECT MEETINGS

- .1 Start-up Meeting.
 - .1 The first meeting following Award of Contract to be scheduled and administered by Engineer-Architect.
 - .2 Engineer-Architect will arrange for physical space for meeting.
 - .3 Engineer-Architect to record minutes and distribute copies of minutes to meeting participants and affected parties.
 - .4 General Contractor is responsible to distribute to all non-attending sub-contractors.
 - .5 Agenda to include the following (as a minimum):
 - .1 Appointment of official representative of participants in work.

- .2 Schedule of work and progress scheduling.
 - .3 Schedule of submission of shop drawings, samples, colour chips.
 - .4 Requirements for temporary facilities, site signs, offices, storage sheds, utilities, fences, temporary enclosures.
 - .5 Delivery schedule of special equipment.
 - .6 Site safety and security.
 - .7 Proposed changes, change orders, site instructions, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements.
 - .8 Owner furnished Products.
 - .9 Record drawings and the process for maintaining them current during the work.
 - .10 Maintenance material and data.
 - .11 Take-over procedures, acceptance, and warranties.
 - .12 Monthly progress claims, administrative procedures, photographs, and holdbacks.
 - .13 Appointment of inspection and testing agencies or firms.
 - .14 Insurances and transcripts of policies.
- .2 Progress Meetings.
- .1 Schedule and administer project progress meetings every two weeks throughout progress of work for projects in excess of \$150,000.00 and/or at call of Engineer-Architect for other projects.
 - .2 Distribute written notice of each meeting four days in advance of meeting date to Engineer-Architect.
 - .3 Provide physical space and make arrangements for meetings.
 - .4 Record minutes. Include significant proceedings and decisions. Identify "action by" parties.
 - .5 Reproduce and distribute copies of minutes within three days after each meeting and transmit to meeting participants, affected parties not in attendance and Engineer-Architect.
 - .6 Agenda to include the following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.

- .3 Field observation, problems, conflicts.
- .4 Problems which impede construction schedule.
- .5 Review of off-site fabrication delivery schedules.
- .6 Corrective measures and procedures to regain projected schedule.
- .7 Revision to construction schedule.
- .8 Progress schedule, during succeeding work period.
- .9 Review submittal schedules: expedite as required.
- .10 Maintenance of quality standards.
- .11 Review proposed changes for affect on construction schedule and on completion date.
- .12 Review site safety and security issues.
- .13 Other business.

1.6 SUBMITTALS

.1 Administrative

- .1 Review, stamp and sign all documents/submittals prior to submission to Engineer-Architect. This review represents that necessary requirements have been determined and verified, and that each submittal has been checked and co-ordinated with requirements of the Work, Contract Documents and field measurements. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .2 Submit to Engineer-Architect all submittals listed for review. Submit all documentation including shop drawing schedule with reasonable promptness (as indicated in 1.6.1.3 and 1.8.3) and in an orderly sequence so as to not cause delay in the Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension (delay claims) by reason of such default will be allowed. Submit a shop drawing schedule immediately after award of contract before first site meeting to Engineer - Architect for review and approval.
- .3 Submit a shop drawing, Product Data and Samples schedule as indicated in 1.6.1.2 and 1.8.3 to Engineer - Architect for review and approval.
- .4 Present shop drawings, product data, samples and mock-ups in SI metric units.
- .5 Work affected by submittal shall NOT PROCEED until review is complete.

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- .6 Notify Engineer-Architect, in writing at time of submission, identifying deviations from requirements of contract Documents stating reasons for deviations.
 - .7 Verify field measurements and affected adjacent Work are co-ordinated.
 - .8 Contractors responsibility for errors and omissions in submission is not relieved by Engineer - Architect's review of submittals.
 - .9 Contractor's responsibility for deviation in submission from requirements of contract documents is not relieved by Engineer - Architect's review.
 - .10 Keep one review copy of each submission on site.
 - .11 When requested by Engineer - Architect provide evidence and proof of type, source and quality of products provided and any additional information requested, especially when working with HPB (High Performance Building) construction.
 - .12 Before placing order submit for approval by Engineer - Architect product data sheets, shop drawings and all required submissions verifying conformance to requirements for all products specified in this tender package and shall include also the following:
 - .1 Product characteristics.
 - .2 Performance criteria.
 - .3 Limitations.
 - .13 Provide manufacturer's instructions to indicate special handling criteria, installation details and sequence, and repair procedures.
- .2 Shop Drawings and Product Data
- .1 "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 the Work.
 - .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connection, 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 tender drawings and specifications.

- .3 Adjustments made on shop drawings by Engineer-Architect are not intended to change Contract Price. If adjustment affect value of Work, state such in writing to Engineer - Architect prior to proceeding with work.
- .4 Make changes in shop drawings as Engineer-Architect may require, consistent with Contract Documents. When resubmitting, notify Engineer - Architect in writing of any revisions other than those requested.
- .5 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 drawings, product data and sample.
 - .5 Other pertinent data.
- .6 In order to speed up the review process: Submit only 3 initial prints of shop drawings for each requirement requested in specification Sections and as Engineer-Architect may reasonably request. All submissions must have all required information requested in these specification documents. Electronic copies will only be allowed as directed by Engineer - Architect. If all applicable parties of the review process have the capability to color scan and/or print the documents once they have been reviewed, stamped and marked-up. The Engineer - Architect may accept electronic version. Contractor is responsible to produce additional color copies of the document as required for the manuals, his own use and as requested by the Engineer - Architect up to a maximum of 8 copies (3 copies for the manuals, 1 copy on site, 1 copy to Department of Transportation and Infrastructure - Buildings Division, 1 copy to consultant, 1 for the contractor and 1 for the supplier) without any additional costs to the Engineer - Architect. If all applicable parties of the review process do not have the capability to color scan and/or print the documents once they have been reviewed, stamped and marked-up. The Contractor is responsible to produce 8 initial copies for revision.
- .7 In order to speed up the review process: Submit only 3 initial copies of product data sheets or brochures for requirements requested in specification Sections and as Engineer-Architect may reasonably request where shop drawings will not be prepared due to standardized manufacture of product. All submissions must have all required information requested in these specification documents. Electronic copies will only be allowed as directed by Engineer - Architect. If all applicable parties of the review process have the capability to color scan and/or print the documents once they have been reviewed, stamped and marked-up.

The Engineer - Architect may accept electronic version. Contractor is responsible to produce additional color copies of the document as required for the manuals, his own use and as requested by the Engineer - Architect up to a maximum of 8 copies (3 copies for the manuals, 1 copy on site, 1 copy to Department of Transportation and Infrastructure - Buildings Division, 1 copy to consultant, 1 for the contractor and 1 for the supplier) without any additional costs to the Engineer - Architect. If all applicable parties of the review process do not have the capability to color scan and/or print the documents once they have been reviewed, stamped and marked-up. The Contractor is responsible to produce 8 initial copies for revision.

- .8 All submissions required throughout these specifications shall be submitted with the following requirements:
 - .1 Date of submission and revision date.
 - .2 Project title and complete project number.
 - .3 Name, address and telephone numbers of the following:
 - .1 General contractor.
 - .2 Sub-contractor.
 - .3 Manufacturer.
 - .4 Supplier.
 - .5 Installer.
 - .4 The specification section which the product is related to, including article number where product is specified. Clearly mark and indicate on first page of each submission. If the submissions do not contain these references they will be returned for re-submission until they are submitted correctly. Owner will not be responsible for any additional cost related to non-conforming submissions.
 - .5 All information requested in applicable specification sections.
 - .6 All submissions shall be reviewed and approved by Engineer - Architect prior to installation. If product does not conform to specifications do not install until product is approved.
 - .7 If any product is installed prior to approval, the removal cost and any related cost is not covered by owner.
 - .8 Delay claims nor any related costs will not be paid for non-conforming submissions.
 - .9 Payments may be held back until proper submission is provided.
 - .10 Details of appropriate portions of work as applicable:

- .1 Fabrication.
- .2 Layout, showing dimensions, including identified field dimensions, and clearance.
- .3 Setting or erection details.
- .4 Capacities.
- .5 Performance characteristics.
- .6 Standards.
- .7 Operating weight.
- .8 Wiring diagrams.
- .9 Single line and schematic diagrams.
- .10 Relationship to adjacent work.
- .11 After Engineer-Architect's review, distribute copies.
- .12 Delete information not applicable to project.
- .13 Supplement standard information to provide details applicable to project.
- .14 If upon review by Engineer-Architect, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .15 The review of shop drawings is for sole purpose of ascertaining conformance with general concept. This review shall not mean approval of detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.

- .1 Submit for review samples as requested in respective specification Sections. Label samples with origin and intended use.
 - .2 Deliver samples prepaid to Engineer-Architect's business address.
 - .3 Where colour, pattern or texture is criterion, submit full range of samples.
 - .4 Adjustments made on samples by Engineer-Architect are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer-Architect prior to proceeding with Work.
 - .5 Make changes in samples which Engineer-Architect may require, consistent with Contract Documents.
 - .6 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.
- .4 Operating Maintenance Manuals
- .1 Two weeks prior to Substantial Performance of the Work or as directed by the Engineer - Architect, submit to Engineer-Architect, one copy of operating and maintenance manual for review. Modify operating maintenance manuals as required by review.
 - .2 Manuals to contain the following.
 - .1 Date submitted.
 - .2 Project title, location and project number.
 - .3 Names and addresses of Contractor and all Sub-Contractors.
 - .4 Table of Contents in accordance to spec sections.
 - .5 Guaranties and Warranties.
 - .6 Operational information on equipment. Cleaning and lubrication schedules, filters, overhaul and adjustment schedules and similar maintenance information.
 - .7 Complete set of reviewed shop drawings.
 - .8 Complete set of project specification.
 - .9 Complete set of all addenda issued.
 - .3 Bind contents in a three-ring, hard covered, plastic jacketed binder. Organize contents into applicable categories of work, parallel to specification Sections.
 - .4 On completion of Work and prior to Final Inspection, submit three copies of modified Operating Maintenance Manuals.

- .5 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
 - .6 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance. Be careful with cleaning agents in HPB (High Performance Building) projects, refer to directives, allowed VOC limits and such as described in "PROJECT SPECIFIC SPECIFICATIONS".
 - .7 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .5 Record Documents
- .1 After award of Contract, Engineer-Architect will provide 2 sets of white print drawings for purpose of maintaining record drawings. Using RED INK, accurately and neatly record deviations from Contract Documents caused by site conditions and changes ordered by Engineer-Architect.
 - .2 The Engineer-Architect may accept electronic as-built drawings in lieu of hardcopies provided stakeholders agree.
 - .3 Record locations of concealed components of mechanical and electrical services.
 - .4 Identify drawings as "Project Record Copy". Maintain in new condition and make available for inspection on site, and at all job meetings, by Engineer-Architect.
 - .5 On completion of Work and prior to final inspection, submit complete set of as-built record documents to Engineer-Architect for preparation of "RECORD DRAWINGS".
 - .6 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.

- .4 Field changes of dimension and detail.
- .5 Changes made by change orders.
- .6 Details not on original Contract Drawings.
- .7 References to related shop drawings and modifications.
- .7 Equipment and Systems
 - .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
 - .2 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
 - .3 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
 - .4 Provide servicing and lubrication schedule, and list of lubricants required.
 - .5 Include manufacturer's printed operation and maintenance instructions.
 - .6 Include sequence of operation by controls manufacturer.
 - .7 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
 - .8 Provide installed control diagrams by controls manufacturer.
 - .9 Provide Contractor's coordination drawings, with installed colour coded piping diagrams.
 - .10 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
 - .11 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
 - .12 Include test and balancing reports.
 - .13 Additional requirements: As specified in individual specification sections.
- .6 Specifications: legibly mark (unless advised otherwise) 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.
- .7 Other Documents: maintain manufacturer's certifications, inspection certifications and field test records required by individual specification sections.

1.7 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit "Worksafe NB" status.
- .2 Submit transcription of insurance immediately after award of Contract.

1.8 SCHEDULE

- .1 Schedules Required.
 - .1 Construction Progress Schedule.
 - .2 Submit Schedule for Shop Drawings, Product Data and Samples (not applicable when indicated, advised or directed for certain projects such as emergency projects and/or summer projects).
 - .3 Cash Allowance Schedule for purchasing products (when applicable).
- .2 Format
 - .1 Prepare schedule in form of horizontal bar chart.
 - .2 Provide separate bar for each trade, critical path item and operation.
 - .3 Provide horizontal time scale identifying first work day of each week.
 - .4 Format for listings: Chronological order of start of each item of work.
- .3 Submissions
 - .1 For projects with tender price above \$500,000.00:
 - .1 Submit initial schedules within 10 days after award of contract, unless indicated or directed otherwise in PROJECT SPECIFIC SPECIFICATIONS (for emergency projects for example).
 - .2 Submit copies to be retained by Engineer-Architect.

- .3 Engineer-Architect will review schedule and return reviewed copy within 5 days after receipt.
- .4 Resubmit finalized schedule within 2 days after return of reviewed copy.
- .2 For projects with tender price below \$500,000.00:
 - .1 Submit schedules at start-up meeting.
- .4 Provide and present revised schedules at each meetings. Progress claims will NOT be processed until schedule has been submitted and appropriated actions have been discussed and initiated to remediate problematic area that would delay the completion date.

1.9 SITE INSTRUCTION

- .1 When a clarification or modification of the Work is required which does not require an adjustment of the Contract Price or Contract Time, the Engineer-Architect will issue a Site Instruction.
- .2 Upon receipt of a Site Instruction, the Contractor to proceed promptly with the Work.

1.10 VALUATION OF CHANGE IN THE WORK

- .1 The value of any changes in the work will be determined in one or more of the following ways, as determined by the Engineer-Architect:
 - .1 Lump Sum: An agreement between the Engineer-Architect and the Contractor on a fixed price.
 - .2 Unit Price: Refer to the Tender Form for unit prices agreed upon or as listed in the Contract.
 - .3 Cost Plus: Cost of work and percentage; or cost and fixed fee.
- .2 When determining costs using the Lump Sum or Cost Plus method, the Contractor to submit an itemized account of the cost of expenditures and savings that includes, but is not limited to, the Sub-Contractors' and Suppliers' signed quotations and breakdown estimates for material and labour (i.e. itemized materials lists and labour, including labour rates and number of hours to perform work).
- .3 When determining costs using the Lump Sum or Cost Plus method, the itemized account to include all documents and supporting data required to certify the adjustments to the Contract Price, as determined by the Engineer-Architect.

- .4 For changes where the individual trade cost is anticipated to be less than \$2,500.00, the requirement for the itemized account may be waived, however individual trade quotations must be supplied.
- .5 If appropriate submittals are not provided as required above, the Engineer-Architect will not be held responsible for costs of delays associated with this Work.

1.11 MARKUP PERCENTAGES

- .1 When determining costs using the Lump Sum or Cost Plus method, the Contractor's percentage markup to be determined as follows:

Contract Price adjustment of \$2,500 or less

Sub-contractor markup is	20%
General contractor's markup on Sub-contractor's price	10%
General contractor's markup if completed by his own force (no markup to be applied to deductions)	20%

Contract Price adjustment over \$2,500

Sub-contractor's markup is	15%
General contractor's markup on Sub-contractor's price	5%
General contractor's markup if completed by his own force (no markup to be applied to deductions)	15%

1.12 QUALITY CONTROL

- .1 Inspection
 - .1 Owner and Engineer-Architect shall have access to the Work at all times.
 - .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Engineer-Architect's instructions, or law of Place of the Work.
 - .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .2 Independent Inspection Agencies
 - .1 Independent Inspection/Testing Agencies will be engaged by Engineer-Architect for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Owner.

- .2 Where tests and/or inspections by designated Inspection/Testing Agencies reveal work not in accordance with contract requirements, the Contractor shall pay costs for all additional tests and/or inspections required until work complies with contract requirements.
- .3 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Reports
 - .1 When additional tests are required due to work not in accordance with contract requirements Submit 4 copies of inspection and test reports promptly to Engineer-Architect.
 - .2 Provide copies to Sub-Contractor of work being inspected/tested and/or manufacturer/ fabricator of material being inspected/tested.

1.13 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

- .1 Installation/Removal
 - .1 Provide construction facilities and temporary controls in order to execute work expeditiously.
 - .2 Remove from site all such work after use.
- .2 Weather Enclosures
 - .1 Provide weathertight closures approved by Engineer - Architect to unfinished door and window openings, top of shafts and also including but not limited to, any and all other openings in floors, roofs, ceilings, walls, foundation walls, which are exposing the interior of the building to the exterior elements.
 - .2 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work area for temporary heat.
- .3 Dust Tight Screens
 - .1 Provide dust tight screens or partitions to localize dust generating activities, and for protection of workers, finished areas of Work and public.
 - .2 Maintain and relocate protection until such Work is complete.
- .4 Dewatering

- .1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water. Incorporate in soil and erosion control plan on HPB (High Performance Building) projects.
- .5 Site Storage/Loading
 - .1 Confine the Work and operations of employees to limits indicated by Contract Documents. Do not unreasonably encumber premises with products.
 - .2 Do not load or permit to be loaded any part of the Work with a weight or force that will endanger the Work.
 - .3 Coordinate with Engineer - Architect the location of the site office and the site equipment and materials storage area.
- .6 Sanitary Facilities
 - .1 Provide sufficient sanitary facilities for workers in accordance with local health authorities.
 - .2 Maintain in clean conditions.
- .7 Water Supply
 - .1 Provide a continuous supply of potable water for construction use.
 - .2 Existing potable water supply as designated may be used during construction period, if written permission is granted by Owner (when applicable).
- .8 Equipment/Tool/Materials Storage
 - .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
 - .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.
- .9 Project/Site Cleanliness
 - .1 Maintain the Work/site in tidy condition, free from accumulation of waste products and debris.
 - .2 Remove waste material and debris from site and deposit in waste container at end of each working day.

- .3 Clean interior areas prior to start of finish work, maintain areas free of dust and other contaminants during finishing operations.

1.14 MATERIAL AND EQUIPMENT

.1 Product and Material 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 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 Engineer-Architect based upon requirements of Contract Documents.

.2 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 seals and labels intact.
- .3 Store products subject to damage from weather in weatherproof enclosures.

.3 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 Engineer-Architect in writing, of conflicts between specifications and manufacturer's instructions, so that Engineer-Architect may establish course of action.

- .3 Improper installation or erection of Products, due to failure in complying with these requirements, authorizes Engineer-Architect to require removal and reinstallation at no increase in Contract Price.
- .4 Workmanship
 - .1 Workmanship shall be best quality, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Engineer - Architect if required Work is such as to make it impractical to produce required results.
 - .2 Do not employ any unfit person or anyone unskilled in their required duties.
 - .3 Decisions as to quality or fitness of workmanship in cases of dispute rest solely with Engineer-Architect, whose decision is final.
- .5 Concealment
 - .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
 - .2 Before installation, inform Engineer-Architect if there is a contradictory situation. Install as directed by Engineer-Architect.
- .6 Additional Requirements: as specified in individual specification sections.

1.15 PROJECT CLOSEOUT

- .1 Final Cleaning
 - .1 When the Work is Substantially Performed, remove surplus products, tools construction machinery and equipment not required for performance of remaining Work.
 - .2 Remove waste materials and debris from site at regularly scheduled times or dispose of as directed by Engineer-Architect. Do not burn waste materials on site, unless approved by Engineer-Architect.
 - .3 Leave work broom clean before inspection process commences.
 - .4 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.

- .5 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and as directed by Engineer - Architect.
- .6 Vacuum clean and dust entire building interiors, including but not limited to behind grilles. louvers, screens above t-bar ceilings, above ducts and/or any equipment above t-bar ceiling and as directed by the Engineer-Architect.
- .7 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .8 Broom clean and wash exterior walks, steps and surfaces.
- .9 Remove dirt and other disfigurations from exterior surfaces.
- .10 Building must be delivered in clean condition as determined and accepted by Engineer-Architect.
- .11 Leave ALL spaces, concealed and exposed, in a clean state free of any dust and debris. Clean to Engineer's-Architect's approval.
- .2 Systems Demonstration (When applicable with new equipment and as directed by Engineer - Architect).
 - .1 Prior to final inspection, demonstrate operation of each system to Owner and Engineer-Architect.
 - .2 Instruct personnel in operation, adjustment, and maintenance of equipment and systems, using provided operation and maintenance data as basis for instruction.
 - .3 Turn over maintenance materials required by respective sections of these specifications.
- .3 Documents
 - .1 Collect all reviewed submittals and assemble documents executed by Sub-Contractors, Suppliers, and Manufacturers as per section 01 00 02 articles 1.6.4 and 1.6.5.
 - .2 Submit material prior to final Application for Payment.
 - .3 Submit operation and maintenance data, record (project record copies) drawings.
 - .4 Provide all warranties and bonds fully executed and notarized. Refer also to section 01 00 02 articles 1.6.4 and 1.6.5.

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List Sub-Contractor, Supplier, and Manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by Sub-Contractors, Suppliers, and Manufacturers, within ten days after completion of the applicable item of work.
 - .4 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Interim Completion Inspection 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.
- .5 Execute transition of Performance and Labour and Materials Payment Bond to warranty period requirements.
 - .6 Submit a final statement of accounting giving total adjusted Contract Price, previous payments, and monies remaining due.
 - .7 Engineer-Architect will issue a final change order reflecting approved adjustments to Contract Price not previously made.
- .4 Spare Parts
 - .1 Provide spare parts, in quantities specified in individual specification sections.
 - .2 Provide special tools of same manufacturer and quality as items in Work.
 - .3 Deliver to site at location as directed; place and store.
 - .4 Receive and catalogue all special tools. Submit inventory listing to Engineer-Architect. Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
 - .5 Maintenance Materials
 - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacturer and quality as items in Work.

- .3 Deliver to site at location as directed; place and store.
- .4 Receive and catalogue all items. Submit inventory listing to Engineer-Architect. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.
- .6 Special Tools
 - .1 Provide special tools, in quantities specified in individual specification section.
 - .2 Provide special tools with tags identifying their associated function and equipment.
 - .3 Deliver to site at location as directed; place and store.
 - .4 Receive and catalogue all special tools. Submit inventory listing to Engineer-Architect. Include approved listings in Maintenance Manual.

1.16 INSPECTION AND DECLARATION PROCEDURES

- .1 Contractor's Inspection: Contractor and all Sub-Contractors shall conduct an inspection of the Work, identify deficiencies and defects; repair as required to conform to Contract Documents. Notify Engineer-Architect in writing of satisfactory completion of Contractor's Inspection and that corrections have been made. The Contract may then request the Engineer-Architect to perform an interim completion inspection.
- .2 Interim completion Inspection: Engineer-Architect and Contractor will perform an inspection of the Work to identify obvious defects or deficiencies. Contractor shall correct the deficiencies within a time period agreeable to Contractor and Engineer-Architect. After all deficiencies are completed the Contractor may call for a final inspection.
- .3 Interim Certificate of Completion: Upon completion of the interim inspection, if Engineer-Architect is satisfied that work is substantially completed and acceptable for use, he may issue an Interim Certificate of Completion, describing portions of work not completed to his satisfaction.
- .4 Final Completion: When Engineer-Architect consider final deficiencies and defects have been corrected and it appears requirements of contract have been totally performed he may issue to the contractor a final certificate of completion.
- .5 Interim Occupancy: On a project which has a renovation and/or addition component and the Contractor is required to complete and turn over an area in

order to facilitate the users operations before undertaking work in another area, the turning over of the completed or partially completed area shall not constitute interim completion of the contract of the area involved. The occupying of a completed or partially completed area will be preceded by an occupancy inspection at which time the Engineer-Architect shall list all deficiencies to the Work and advise Contractor accordingly. The user shall carry out and be responsible for day to day maintenance on the area that is occupied. Contractor shall be responsible to do maintenance on and operate any mechanical or electrical systems which are not certified complete by the Engineer-Architect. No warranties or lien periods shall begin as a result of the above described interim occupancy period.

- .6 Interim/Final Certificates of Completion: If the Engineer-Architect does not find the Work to be substantially completed and an Interim/Final Certificate is not issued, the costs associated with extra inspections shall be borne by the Contractor.
- .7 Commencement of Lien and warranty periods: all lien and warranty periods shall commence at date of interim certificate of completion. Warranty period shall be one year minimum from this date. Coordinate with other specification sections for additional coverage where indicated.

1.17 Apprentice Ratio

- .1 The province recognizes the importance of apprenticeship to the construction industry and believes that it's a joint responsibility of the government and employers to promote the apprenticeship program. As such, General Contractors and individual Subcontractors are required to employ one (1) apprentice for every five (5) journeymen of a specific trade that their specific firm employs on that specific project. The ratio is project specific, company specific and trade specific. The employment of apprentices must be maintained throughout the duration of the project. Some specific trades may require modifications to this article; refer to each individual specification sections for additional information.
- .2 The following applies to this tender package:
 - .1 The New Brunswick Apprenticeship and Occupational Certification Act Chapter 2012, c.19
 - .1 Compulsory Occupations Regulation 2014-133

PART 2 **PRODUCTS**

2.1 **NOT USED**

.1 Not Used.

PART 3 **EXECUTION**

3.1 **NOT USED**

.1 Not Used.

END OF SECTION

PART 1 **GENERAL**

1.1 **FIRE SAFETY PLAN**

- .1 Provide to Engineer - Architect a Fire Safety Plan for review and acceptance. Maintain the Fire Safety Plan at all times. Provide also when directed by Engineer - Architect a copy to the authorities having jurisdiction.
- .2 Fire safety Plan to respect and be coordinated with existing Fire Safety Plan for the building where work is performed.
- .3 Work shall not commence until Fire Safety Plan is considered acceptable by Engineer - Architect.
- .4 Fire Safety Plan shall include but not be limited to the following:
 - .1 Determine with the Engineer - Architect the appropriate time to carry out the construction activities with the owner and the users of the building or the Client Department (Education, School District, etc.).
 - .2 Schedule, determine and indicate when and where construction activities will take place.
 - .3 Hazardous tasks shall only take place as scheduled and be coordinated with all parties (Department of Transportation and Infrastructure - Buildings Division Project Manager, Fire Chief, User and Owner...)
 - .4 Advise all involved with work scheduled each day prior to commencing of work.
 - .5 Delegate key tasks to employees who will be in charge of making sure that these duties are carried out. Some of these fire duties would include fire watch, who will perform it and at what time, verification of equipment like fire extinguishers, nearest telephone in case of emergency...
 - .6 Determine and indicate measures to control fire hazard around building and construction area.
 - .7 Assess all possible fire hazards such as the use of propane torches, construction heaters, chop saws, grinders, etc. Evaluate use of all equipment and their possibility to cause fire. Use equipment with caution. Refer also to National Fire Code for additional information.

1.2 FIRE DEPARTMENT BRIEFING

- .1 Coordinate arrangements for the contractor's employees to be briefed on Fire Safety at their pre-work conference by Fire Chief before any work is commenced.

1.3 REPORTING FIRES

- .1 Know the location of nearest fire alarm manual pull station and telephone, including the emergency phone number.
- .2 Report immediately all fire incidents to the Fire Department as follows:
 - .1 Activate nearest fire alarm manual pull station; or telephone.
 - .2 Alert the occupants and commence the evacuation procedures immediately as per evacuation plan. Safety of occupants is the priority.
- .3 Person activating fire alarm manual pull station will exit the structure and stand by to direct Fire Department to scene of fire.
- .4 When reporting a fire by telephone, give location of fire, name or number of building and be prepared to verify the location.

1.4 INTERIOR AND EXTERIOR FIRE PROTECTION AND ALARM SYSTEMS

- .1 Fire protection and alarm system will not be:
 - .1 obstructed;
 - .2 shut-off; and
 - .3 left inactive at the end of a working day or shift without authorization from Fire Chief.
- .2 Fire hydrants, standpipes and hose systems will not be used for other than fire-fighting purposes unless authorized by Fire Chief.

1.5 FIRE EXTINGUISHERS

- .1 Supply fire extinguishers, as called by fire Chief, necessary to protect the work in progress and the Contractors physical plant on site.
- .2 Fire extinguishers specified in other sections of this specification are in addition to those required by Fire Chief.
- .3 Know the location of the fire extinguishers and know how to use them properly.

1.6 INSTALLATION AND/OR REPAIR OF ROOF TO INCLUDE CONTRACTORS
PHYSICAL PLANT AT SITE

- .1 When applicable and as directed by Engineer - Architect follow Fire Safety Requirements as described below: Notify Fire Chief of the location of any asphalt kettles and the dates that the kettles will be in use. Ensure personnel use and take the following precautions:
 - .1 Use kettles equipped with thermometers or gauges in good working order.
 - .2 Locate kettles in a safe place outside of building or, if approved by Fire Chief, on non-combustible roof. Locate to avoid danger of ignition combustible material below.
 - .3 Maintain continuous supervision while kettles are in operation and provide metal covers for the kettles to smother any flames in case of fire. Fire extinguishers shall be provided as required in article 1.5 of section 01 35 31.
 - .4 Prior to start of work, demonstrate container capacities to Fire Chief.
 - .5 Use only glass fibre roofing mops.
 - .6 Used roofing mops will not be left unattended on roof and shall be stored away from the building and combustible materials.
 - .7 All roofing materials will be stored in location no closer that 3 m to any structures.
- .2 Refer to the roofing Specification section for descriptions and procedures regarding work for this trade.

1.7 BLOCKAGE OF ROADWAYS

- .1 Advise Fire Chief of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by fire chief, erecting of barricades and the digging of trenches.
- .2 Do not Block fire exits without prior approval by fire Marshall and Engineer - Architect. Provide new temporary fire exits and safe path of travel to secure area as required to maintain safety of building occupants. These exits shall conform to article 8.2.1.2 of the National Building Code of Canada (current version adopted by the province of New Brunswick).

1.8 SMOKING AND VAPING

- .1 Comply with the New Brunswick Smoke-free Places Act 2011, c.222.

- .2 Smoking, as defined by the Act, is not permitted on any Provincial Government property.

1.9 RUBBISH AND WASTE MATERIALS

- .1 Rubbish and waste materials are to be kept to a minimum.
- .2 The burning of rubbish is prohibited.
- .3 Removal:
 - .1 Remove all rubbish from the work site at the end of the work day or shift or as directed.
- .4 Storage:
 - .1 Store oily waste in approved receptacles to ensure maximum cleanliness and safety.
 - .2 Deposit greasy or oily rags and materials subject to spontaneous combustion in an approved receptacles and remove as required in item 1.9.3.1 of "Rubbish and Waste Materials" article.

1.10 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- .1 The handling, storage and use of flammable and combustible liquids are to be governed by the current National Fire Code of Canada.
- .2 Flammable and combustible liquids such as gasoline, kerosene and naphtha will be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes, requires the permission of the Fire Chief.
- .3 Transfer of flammable and combustible liquids is prohibited within buildings or jetties.
- .4 Transfer of flammable and combustible liquids will not be carried out in the vicinity of open flames or any type of heat-producing devices.
- .5 Flammable liquids having a flash point below 38°C such as naphtha or gasoline will not be used as solvents or cleaning agents.

- .6 Flammable and combustible waste liquids, for disposal, will be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and the Fire Department is to be notified when disposal is required.

1.11 HAZARDOUS SUBSTANCES

- .1 Work entailing the use of toxic or hazardous materials, chemicals and/or explosives, otherwise creates a hazard to life, safety or health, will be in accordance with the National Fire Code of Canada.
- .2 Notify Fire Chief of work involving welding, burning or the use of blow torches and salamanders, in buildings or facilities.
- .3 When work is carried out in dangerous or hazardous areas involving use of heat, provide fire watchers, equipped with sufficient fire extinguishers. Determination of dangerous or hazardous areas along with the level of protection necessary for Fire Watch is at the discretion of the Fire Chief. Contractors are responsible for providing fire watch service for work on a scale established and in conjunction with the Fire Chief at the pre-work conference.
- .4 Where flammable liquids, such as lacquers or urethanes are to be used, proper ventilation will be assured and all sources of ignition are to be eliminated. The Fire Chief is to be informed prior to and at the cessation of such work.

1.12 QUESTIONS AND/OR CLARIFICATION

- .1 Direct any questions or clarification on Fire Safety in addition to above requirements to Fire Chief.

1.13 FIRE INSPECTION

- .1 Contractor to advise the Engineer - Architect within 24 hours of any site inspections performed by the Fire Chief or any authority having jurisdiction.
- .2 Contractor to advise Engineer - Architect within 24 hours of any site instructions and/or directives given by the Fire Chief or any authority having jurisdiction.
- .3 Allow Fire Chief unrestricted access to the work site.
- .4 Co-operate with the Fire Chief during routine fire safety inspection of the work site.
- .5 Immediately remedy all unsafe fire situations observed by the Fire Chief.

1.14 FIRE WATCH REQUIREMENTS FOR FIRE ALARM SYSTEM;
MODIFICATIONS/RENOVATIONS

- .1 If modifications/renovations are done to a fire alarm system, a fire watch is not required during the fire alarm contractor's work day provided the following are provided:
 - .1 The area of the building where the fire alarm system is not operational shall be constantly occupied by the fire alarm contractor's staff.
 - .2 If the building is equipped with a sprinkler system, the sprinkler system shall remain fully operational and the sprinkler system shall be monitored by the fire alarm system.
 - .3 If the fire alarm system is not fully functional after the fire alarm contractors' work day, then a dedicated fire watch is required.

1.15 FIRE WATCH REQUIREMENTS FOR SPRINKLER SYSTEM;
MODIFICATIONS/RENOVATIONS

- .1 If modifications/renovations are done to a sprinkler system, a fire watch is not required during the sprinkler contractor's work day provided the following are provided:
 - .1 The area of the building that the sprinkler system is not operational shall be constantly occupied by the sprinkler contractor's staff.
 - .2 The fire alarm system shall be fully functional throughout the entire building, including the work area.
 - .3 If the sprinkler system is not fully functional after the sprinkler contractor's work day, then a dedicated fire watch is required.

1.16 FIRE WATCH

- .1 In a building where both the sprinkler system and fire alarm system are being modified or renovated, a dedicated 24 hour per day fire watch is required.
 - .1 The fire watch shall consist of the following:
 - .1 The dedicated person(s) whose only job function is providing the fire watch.
 - .2 The dedicated person(s) shall have a means to immediately contact 911 services.
 - .3 The dedicated person(s) shall have a means of contacting and shall be responsible to notify the building occupants.

- .4 The dedicated person(s) shall be familiar with the construction fire safety plan and understand his/her responsibilities.
- .5 The dedicated person(s) shall, on an hourly basis, patrol the area(s) where the fire alarm/sprinkler systems are not operational and record on a sign off sheet that the patrol was done and the time of the patrol.
- .6 The dedicated person(s) shall be trained in the use of a fire extinguisher.

1.17 HOT WORK PROCEDURES

- .1 Welding, Cutting, Burning, Soldering, Grinding, Torching.
 - .1 The intent of this procedure is to assure that all staff and contractors take appropriate steps to assure a safe environment for themselves, all building occupants and the property where the work is being carried out.
 - .2 Before starting any work, check the work area for any flammable and combustible materials. Remove all these materials from the affected work area(s).
 - .3 Have a list of persons with contact information and means of contacting in case of an emergency.
 - .4 Maintain for a minimum of two hours, after any hot work is performed, a fire and sparks watch.
 - .5 Warn all personnel, including staff and building occupants in the area, if work including sparks or slag creates a hazard.
 - .6 Coordinate and review all work procedures with authority having jurisdiction.
 - .7 Carry out welding in ventilated area. Where required in poor ventilated areas, provide mechanical ventilation.
 - .8 Use spark and fire watches where sparks cannot be contained and there is a possibility of contact with combustible materials.
 - .9 Place compressed gas cylinders so that they are not in contact with falling sparks or slag. Shielding gases used for arc welding can displace air and cause injury or death. Always use enough ventilation, especially in confined areas, to ensure breathing air is safe.
 - .10 Complete a site evaluation and authorization form for each work day and/or each separate work site where hot work is scheduled to occur. Make copies available to Engineer - Architect at all times.

- .11 If any smoke and/or fire detection systems are disabled by the work being carried out, notify and coordinate with authority having jurisdiction before doing so.
 - .12 Re-activate any smoke and/or fire detection systems at the completion of any hot work prior to leaving the work site.
 - .13 Contain as much as practical all spark and slag with fire blankets or other similar devices approved by the authority having jurisdiction.
 - .14 Maintain all fire extinguishers within 20 ft. of all hot work. These fire extinguishers shall be easily accessible at all times, keep pathways clear of any materials, products or debris. All fire extinguishers must be dated correctly for operation and be operational and in place before any work may commence.
- .2 Refer also to National Building Code for hot work procedures for all work.
 - .3 Refer also to fire safety plan of article 1.1 of this section.

PART 2 **PRODUCTS**

- 2.1 Not Used
- .1 Not Used.

PART 3 **EXECUTION**

- 3.1 Not Used
- .1 Not Used.

END OF SECTION