

## **PART 1 GENERAL**

### **1.1 ADMINISTRATIVE**

- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are co-ordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .10 Keep one reviewed copy of each submission on site.

### **1.2 SHOP DRAWINGS AND PRODUCT DATA**

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Submit drawings stamped and signed by professional Departmental Representative registered or licensed in Newfoundland and Labrador of Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion

of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

- .4 Allow 14 days for Departmental Representative's review of each submission. Additional time will be required for large submissions should a large quantity be submitted at one time, etc.
- .5 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, in duplicate, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.
- .8 Submissions include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name and address of:
    - .1 Subcontractor.
    - .2 Supplier.
    - .3 Manufacturer.
  - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
  - .5 Details of appropriate portions of Work as applicable:
    - .1 Fabrication.
    - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
    - .3 Setting or erection details.
    - .4 Capacities.
    - .5 Performance characteristics.
    - .6 Standards.
    - .7 Operating weight.
    - .8 Wiring diagrams.
    - .9 Single line and schematic diagrams.
    - .10 Relationship to adjacent work.
- .9 After Departmental Representative's review, distribute copies.

- .10 Subsequent submissions following the first submission shall clearly highlight any and all revisions through the use of such things as italics, clouds, revision triangles, strokes through text to be deleted, cross out of items to be deleted, etc.
- .11 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .12 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
  - .2 Testing must have been within 3 years of date of contract award for project.
- .13 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
  - .2 Certificates must be dated after award of project contract complete with project name.
- .14 Submit electronic copies of manufacturer's instructions for requirements requested in specification Sections and as requested by Departmental Representative
  - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .15 Submit electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative
- .16 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .17 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .18 Delete information not applicable to project.
- .19 Supplement standard information to provide details applicable to project.
- .20 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned, and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .21 If the submission is received by the Departmental Representative and deemed "Revise and Resubmit" or "Not Reviewed", then any or all costs associated with additional l

### **1.3 SAMPLES**

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative's business address.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.
- .8 Where samples are rejected, new samples shall be submitted as soon as possible after notification of rejection. New samples shall be marked "Second Submission", in addition to the required information on the label.
- .9 Rejected samples shall be removed from the site.

### **1.4 MOCK-UPS**

- .1 Erect mock-ups in accordance with Section 01 45 00 - Quality Control.

### **1.5 CERTIFICATES AND TRANSCRIPTS**

- .1 The Contractor shall submit to the Engineer for pre-approval prior to construction, the following documentation for incorporation into the Contract Documents:
  - .1 Performance Bond.
  - .2 Labour and Materials Bond.
  - .3 Certificate of Liability Insurance.
  - .4 Certificate of Property Insurance.
  - .5 Certificate of Vehicle and Equipment Insurance.
  - .6 Letter of Good Standing, WHSCC.
  - .7 Construction Schedule.

### **1.6 GRANULAR, AGGREGATE AND BACKFILL MATERIAL CERTIFICATION**

- .1 At least two (2) weeks prior to commencing work, the Contractor shall inform the Engineer of proposed sources of materials including, but not limited to, rock backfill, common backfill, granular base and sub-base material, aggregates and all other materials

requiring testing prior to use on the project.

- .2 The Contractor shall provide access to the proposed source of each particular material type for the purpose of sampling by the Engineer.
- .3 Make changes in samples which the Engineer may require, consistent with the Contract Documents.
- .4 Adjustments made on samples by the Departmental Representative are not intended to change the Contract Price. If adjustments affect the value of the work, state such in writing to the Departmental Representative and obtain an approved change order prior to proceeding with the work.
- .5 Do not proceed with Work affected by submittal until review is complete.

#### **1.7 CONCRETE MATERIAL CERTIFICATION**

- .1 Prior to starting concrete work, submit to the Departmental Representative, manufacturer's test data and certification that the following material meets requirements of this specification:
  - .1 Portland Cement.
  - .2 Admixtures.
  - .3 Joint Sealants.
  - .4 Curing Materials.
- .2 Do not proceed with Work affected by submittal until review is complete.

#### **1.8 MIX DESIGN SUBMISSION**

- .1 Submit mix designs to Departmental Representative for review four (4) weeks prior to commencing concrete work.
- .2 Do not proceed with Work affected by submittal until review is complete.

#### **1.9 RECORD DRAWINGS**

- .1 As Work progresses, Contractor shall record in AutoCAD format "as built" deviation from Contract Documents as a result caused by Site conditions or various directives by addenda, correspondence, Site clarifications, Site instructions, Change Orders, shop drawings and authorities having jurisdiction. Deviations to be recorded shall include in general, but shall not necessarily be limited to, things hidden from view, things of major importance to future operations, maintenance and alterations and additional Work.
- .2 White prints will be provided by Engineer. Record changes in the Work on these prints in red ink.
- .3 Record dimensions in metric measure.

- .4 Record work constructed differently than shown on Contract Documents.
- .5 Contractor shall pay the cost of uncovering and making good facilities, systems and services, which have been installed before inspection, before specified as-built measurements have been obtained by the Contractor and approved by Engineer.
- .6 Contractor's responsibility for errors and omissions in submission is not relieved by the Engineer's review of submissions.
- .7 Record the following information and submit to the Engineer on a bi-weekly basis:
  - .1 All site locations, elevations and details surveyed, dimensioned and marked-up to consistently report finished installation conditions.
  - .2 The Contractor shall accurately record and submit the following information:
    - .1 Placement Records: A time series of placement information for excavation, base materials, pipe materials, electrical works, and asphalt works shall be indicated on a set of drawings.
    - .3 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to geodetic datum.
    - .4 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
    - .5 Field changes of dimension and detail.
    - .6 Location of all capped or terminated services and utilities.
    - .7 As constructed location, and where applicable, azimuth of all airfield lighting fixtures and associated electrical equipment.
    - .8 As constructed location, alignment and elevation of all ductbanks, manholes and related electrical-civil works.
    - .9 Changes made as a result of Site Instructions.
    - .10 Details not on original Contract Drawings.
    - .11 References to related shop drawings and modifications.
- .8 Adhere to the following Quality Control Tolerances:
  - .1 All horizontal measurements are to be taken to an accuracy of 10 mm plus or minus.
  - .2 All vertical measurements are to be taken to an accuracy of 10 mm plus or minus.
  - .3 Present all as-built drawing measurements in SI metric units.
- .9 Identify each record drawings as a "Project Record Copy". Maintain in good condition, do not use for construction purposes and make available to SJIAA and the Engineer at all times.
- .10 Failures to maintain as-builts current and complete to the satisfaction of Engineer shall result in financial penalties in the form of progress payment reductions and holdback assessment.
- .11 Submit one complete set each of Project Record drawings in paper and AutoCAD format to Engineer on application for Certificate of Substantial Performance.

## **1.10 FINAL SURVEY**

- .1 Submit final civil site survey certificates, certifying that elevations and locations of completed Work are in conformance, or non-conformance with the Contract Documents.

## **1.11 AS-BUILT DIGITAL SURVEY**

- .1 All survey information to be completed using Total Station.
- .2 In addition to submission of the as built drawings as specified under Paragraph 1.5, Contractor shall submit the following digital survey data on completion of the Work:
  - .1 Ground survey of all completed surfaces. Surveys shall include the layout coordinates shown on the Drawings, grade break changes, limits and a 5 m x 5 m (unless noted otherwise) spot elevation grid for each of the following:
    - .1 Top of Hot Mix Asphaltic Concrete (HMAC) pavement.
    - .2 Top of Granular Subbase.
    - .3 Top of Granular Base.
    - .4 Top of subgrade.
    - .5 Top of graded area and native infill areas (15m x 15m grid and grade breaks.)
    - .6 Inverts of all storm drainage, edge drainage and culverts.
    - .7 Location of all finished line markings.
    - .8 Inverts and tops of banks for all ditches.
    - .9 Locations, inverts of pipes and sumps and rim elevations for new drainage works, including manholes.
    - .10 Locations and elevations of all lighting components pull pits, fixtures, manholes, catchbasins etc. referenced to geodetic datum.
  - .3 Results of the as-built survey shall be provided to SJIAA and Engineer in digital form. The digital survey information shall be provided in AutoCAD format and shall consist of three-dimensional (3D) survey data points based on the SJIAA grid.
  - .4 Survey results shall be provided on an updated weekly basis and after Substantial Performance of the Work. Supplementary data shall also be provided after Total Performance of Work if survey data is altered.

## **PART 2 PRODUCTS**

### **2.1 NOT USED**

- .1 Not Used.

**PART 3        EXECUTION**

**3.1            NOT USED**

.1            Not Used.

**END OF SECTION**