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## **PART 1 - GENERAL**

### 1. General

- .1 The term "shop drawings" means plans, drawings, diagrams, illustrations, schedules, performance charts, brochures and other data, including site erection plans or drawings which are to be provided by the Contractor to illustrate details of a portion of the Work.
- .2 Submit to Contract Administrator for review shop drawings, product data and samples specified.
  - .1 Initial submission to be labeled - Not for Construction. Drawings to include all pumping equipment, valves, piping, controls and related Works.
  - .2 Upon approval from Contract Administrator of initial submission provide all shop drawings.
- .3 Until submittal is reviewed, Work involving relevant product may not proceed.
- .4 Where articles or equipment from any subtrade, specification section or plan attach and/or connect to other articles or equipment under any other subtrade, specification section or plan, be responsible and clearly indicate that all such attachments and connections (including electrical) have been properly coordinated, regardless of the trade, specification section or plan grouping under which the adjacent articles or equipment will be supplied or installed. Notify the Contract Administrator in writing if there are any deviations in the shop drawings from the requirements of the contract documents and any obvious or implied conflicts or errors between the various trades, specification sections and plans.
- .5 The shop drawing review process is for the sole purpose of conformance with the general design concept. The shop drawing review shall not mean that the Contract Administrator approves the detail design inherent in the shop drawing. The responsibility for shop drawings shall remain with the Contractor submitting the shop drawings. The shop drawing review shall not relieve the Contractor of their responsibility for errors or omissions in the shop drawings or of their responsibility for meeting all requirements of the contract documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site for information that pertains solely to fabrication process or to techniques for construction and installation and for co-ordination of the work of all subtrades.

### 2. Shop Drawings

- .1 Plans or drawings to be originals prepared by Contractor, Subcontractor, Supplier or Distributor, which illustrate appropriate portion of Work showing fabrication, layout, setting or erection details as specified in appropriate sections.
- .2 Prior to submitting shop drawings for the Contract Administrator 's review, the Contractor shall review all shop drawings to confirm their meeting all requirements of the project and mark and sign his approval on the plans or drawings which shall certify review of submission, verification of field dimensions and compliance with contract documents.
  - .1 Indicate specification section and item number on all documents submitted. For each submission package provide a letter of transmittal indicating specifications sections and item numbers submitted for approval in submission package.
- .3 Each shop drawing must be certified by manufacturer and as such, shall indicate that all product engineering has been performed to ensure the product will meet the requirements of the intended installation.

- .4 Include all electrical wiring diagrams and installation plans or drawings for electrically powered equipment.
- .5 Wherever documents are provided in S.I. units, all performance and dimensional data shall be submitted in S.I. units.
- .6 As a minimum submissions shall:
  - .1 Delete information which is not applicable to the project.
  - .2 Supplement standard information to provide additional information applicable to project.
  - .3 Clearly indicated product or material, complete with model number and make.
  - .4 Show dimensions and clearances required.
  - .5 Show performance characteristics and capacities.
  - .6 Show wiring diagrams (where requested) and controls.
  - .7 Include overall specification and item numbers.

### 3. Product Data

- .1 Certain specification sections specify that manufacturer's standard schematic plans or drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and other standard descriptive data will be accepted in lieu of shop drawings, provided that the product concerned is clearly identified.
- .2 Submit in sets, not as individual submissions.
- .3 Above will only be accepted if they conform to the following:
  - .1 Delete information which is not applicable to the project.
  - .2 Supplement standard information to provide additional information applicable to project.
  - .3 Clearly indicated product or material, complete with model number and make.
  - .4 Show dimensions and clearances required.
  - .5 Show performance characteristics and capacities.
  - .6 Show wiring diagrams (where requested) and controls.
  - .7 Include overall specification and item numbers.

### 4. Contractor's Responsibility

- .1 Contractors responsibilities (as applicable to the General and Sub contractors):
  - .1 Review shop drawings, product data and samples prior to submission to Contract Administrator.
  - .2 Verify:
    - .1 Field measurements.
    - .2 Field construction criteria.
    - .3 Catalogue numbers and similar data.

- .4 Conformance with the specification – compare specification numbers and item numbers to all required shop drawings.
- .3 Co-ordinate each submittal with the requirements of the Work of all trades and contract documents. The Contractor is responsible to ensure and confirm that applicable trades have reviewed and accepted the submission and made any and all required changes to construct a finished and operating project as required by the contract documents.
- .4 Clearly identify any variations in the shop drawings from the contract requirements. If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submissions. If the Contract Administrator approves any such variation, the Contract Administrator shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued. In all cases the Contractor is responsible for coordination of any and all changes with all applicable sub contractors.
- .5 Responsibility for deviations in submittals from requirements of Contract documents and errors and omissions is not relieved by Contract Administrator’s review of submittals, unless Contract Administrator gives written acceptance of specified deviations.
- .6 After Contract Administrator’s review, distribute copies, maintain one copy on site.

5. Submission Requirements

- .1 Allow for a 7 day period for review by the Contract Administrator for each individual submission.
- .2 Accompany submissions with transmittal letter which lists shop drawings included for review, complete with specification and item numbers.
- .3 No claims will be allowed that may arise because of delays in submissions, re-submissions and review of shop drawings.
- .4 Obtain final review prior to ordering, fabricating or completing installation work.
- .5 Initial submission - Provide one electronic pdf copy of shop drawings and product data to be reviewed by Contract Administrator (one copy to be returned upon completion of review). Each subsequent re-submission (until acceptance) also to include only three copies of the plans or drawings and data for review.
- .6 After final acceptance produce 6 copies of product data and distribute as follows:
  - .1 Contractor - operating manual (3).
  - .2 Contractor - file (1).
  - .3 Contractor - site (2) (provide 1 field set to Contract Administrator).

6. Items for Submission

- .1 In general supply shop drawings for all materials being incorporated into the Works. The following is a partial listing of items of Work to be submitted on the shop drawings:
  - .1 Mechanical and Electrical

- .1 Pump.
  - .2 Valves.
  - .3 Actuators.
  - .4 Backflow Preventers.
  - .5 Manhole, Frame and Cover.
  - .6 Controls.
- .2 The listing above does not supersede other items that may be requested on the plans or the specifications or other items requested by the Contract Administrator.

7. Record Drawings

- .1 During construction revise all plans (and/or shop drawings) to indicate all changes that occurred during construction and revise plans to “record” copy. Indicate on the plans (and/or shop drawings) that such revisions have been completed. Provide two copies of record plans to Contract Administrator for review.
  - .1 Provide Contract Administrator monthly progress updates of as-builts and applicable copies as project proceeds.
- .2 After Contract Administrator has reviewed initial record plans and drawings and deemed them to be “satisfactory” provide copies of all plans and drawings.
- .3 Final record drawings are to be provided a minimum of 2 weeks prior to request for Substantial Performance.

8. Contract Administrator’s  
Review

- .1 The Contract Administrator’s review pertains to general design only. Errors in dimensions, quantity or interference will be noted, if noticed, but this will not in any way relieve the Contractor from his responsibility for errors or omissions.
- .2 Contract Administrator’s review may result in a request for revisions to shop drawings, product data or samples. Complete revisions ensuring all requests for revision items have been addressed and resubmit for Contract Administrator’s review. If the second submission does not address all revisions requested in the first review, the City of Winnipeg retains the right to hold the Contractor responsible for Contract Administrator’s costs of additional reviews. Such additional costs may be deducted from the overall payments due.

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End Section 01340