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| Version | Date | Description of Revisions |
| 1 | August 30, 2006 | Approved final document. |
| 2 | September 27, 2007 | Minor revisions by Legal Services |
| 3 | December 29, 2009 | Modified ‘Related Sections’ |
| 4 | September 27, 2010 | Minor revisions |
| 5 | April 10, 2012 | Addition of References and Replacement Parts sections on this page. |
| 6 | July 6, 2012 | Change tab settings for page 1-5. |
| 7 | April 10, 2015 | General Formatting |
| 8 | December 15, 2015 | Minor clarifications based on comments by Legal Department. AAM |
| 9 | September 20, 2016 | Improved wording for Manufacturer’s Certificate of Proper Installation (based on lessons learned from Orchard Heights project) (AV) |
| 10 | May 14, 2019 | Removed Related Section 01815 – Commissioning (AM) |

NOTE:

This is a CONTROLLED Document. Any documents appearing in paper form are not controlled and should be checked against the on-line file version prior to use.

**Notice:** This Document hardcopy must be used for reference purpose only.

**The on-line copy is the current version of the document.**

# GEneral

## Related Sections

### *[Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.*

### *Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.*

### *Contractor is responsible for coordination of the Work.*

### *This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]*

### *[List Sections specifying related requirements.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: *[Optional short phrase indicating relationship]*.

### Sections:

#### Section 01310 – Progress Schedules

#### Section 01425 – Computerized Maintenance Management System Data Requirements

#### Section 01430 – Operation and Maintenance Data

#### Section 01810 – Equipment Testing and Facility Commissioning

#### Section 01820 – Demonstration and Training

#### Division 13 specifications as applicable

#### Product requirements for [item]... for installation under this Section.

## Definitions

### Person-Day: One person for 8 hours within the Contractor’s regular working hours.

## Measurement and Payment

### The work outlined in this Section will not be measured separately for payment. The work outlined in this Section shall be included in the Contract Price.

## Submittals

### Informational Submittals:

#### Training Schedule: Submit the training schedule a minimum of 21 Days prior to the start of equipment installation and revise as necessary for acceptance by the Region.

#### Lesson Plan: Submit a proposed lesson plan a minimum of 21 Days prior to the scheduled training and revise as necessary for acceptance by the Region.

## Qualification of Manufacturer’s Representative

### An authorized representative of the manufacturer, factory trained, and experienced in the technical applications, installation, operation, and maintenance of the respective equipment, subsystem, or system, with full authority by the equipment manufacturer to issue the certifications required of the manufacturer. Additional qualifications may be specified elsewhere in the Contract Documents.

### The Contractor shall submit qualifications documentation for each manufacturer’s representative. The representative is subject to acceptance by the Region and the Consultant. No substitute representatives will be allowed unless the prior written approval of the Region has been obtained.

# PRODUCTS (NOT USED)

# EXECUTION

## Fulfillment of Specified Minimum Services

### Furnish all manufacturers’ services required in order to meet the requirements of this Section.

### Where time is necessary in excess of that stated in the Specifications for manufacturers’ services, or when a minimum amount of time is not specified, the time required to perform the specified services shall be considered incidental to the manufacturer’s scope of work.

### Schedule all manufacturers’ services to avoid conflict with other on Site testing or any other manufacturers’ on Site services.

### Determine, before scheduling services, that all conditions necessary to allow for successful testing have been met.

### Only those days of service approved by the Consultant will be credited to fulfill the specified minimum services.

### Manufacturers’ on Site services shall include but not be limited to, the following:

#### Assistance during Product (system, subsystem, or component) installation including observation, guidance, and instruction of the Contractor’s assembly, erection, installation or application procedures.

#### Inspection, checking, and adjustment as required for the Product (system, subsystem, or component) to function as warranted by the manufacturer and as necessary in order to furnish the Manufacturer’s Certificate of Proper Installation.

#### Provision of laptop or other device, communication cables, licenses for software, software and any other device or component required to connect to the Product (as applicable) to access all features of the product.

#### Providing, on a daily basis, copies of all of the manufacturers’ representatives’ field notes and data to the Consultant.

#### Provision of all required Product (including all sub-components) data and information required as specified by Section 01425 - Computerized Maintenance Management System Data Requirements.

#### Revisiting the Site as required in order to correct any problems until the installation and operation are acceptable to the Consultant.

#### Resolution of assembly or installation problems attributable to, or associated with, the respective manufacturer’s Products and systems.

#### Assistance during functional and performance testing, and facility startup and evaluation.

#### Providing the required assistance during formal commissioning as per Section 01810 – Equipment Testing and Facility Commissioning.

#### Training of the Region’s personnel in the operation and maintenance of the respective Product, as required. Refer to Section 01820 – Demonstration and Training.

#### Additional requirements as may be specified elsewhere in the Contract Documents.

### The Region is not responsible for additional costs and time associated with transportation, lodging, meals, or training materials.

## Manufacturer’s Certificate of Compliance

### Submit prior to shipment of the Product or material.

### The Consultant may permit the use of certain materials or assemblies prior to sampling and testing if they are accompanied by a certification of compliance acceptable to the Consultant.

### The Contractor shall ensure that the certification of compliance is by the Product manufacturer certifying that the Product or material specified conforms to, or exceeds, the specified requirements and performance specified in the Contract Documents. Attach any supporting reference data, affidavits, and certifications as appropriate. In cases where AWWA Standards are cited in the specification, comply with all requirements contained therein.

### The certificate may reflect recent or previous test results on the material or Product, if acceptable to the Consultant.

## Manufacturer’s Certificate of Proper Installation

### Submit a completed Manufacturer’s Certificate of Proper Installation Form (included as a supplement to this Section) prior to shipment of the Product or material.

### The Contractor shall ensure that a Manufacturer’s Certificate of Proper Installation form will be completed and signed by the equipment manufacturer's representative.

### The Manufacturer’s Certificate of Proper Installation shall certify that the signing party is a duly authorized representative of the manufacturer, is authorized by the manufacturer to inspect, approve, and operate their equipment and is authorized to make recommendations required to ensure that the equipment is complete and operational.

## Training

### General:

#### Provide the manufacturers’ representatives for detailed classroom and hands on training for the Region’s personnel on the operation and maintenance of the specified Products (system, subsystem, and component) and as may be required.

#### The Contractor shall ensure that the manufacturer’s representative will provide trained, articulate personnel to coordinate, deliver and expedite training, to be present during all training coordination meetings with the Region, and who are familiar with the operation and maintenance manual information specified in Section 01430 - Operation and Maintenance Data. Proof of prior training experience shall be provided upon request by the Consultant.

#### The Contractor shall ensure that the manufacturer’s representative will be familiar with the facility operation, maintenance requirements, and the specified equipment to be installed.

#### Provide complete training materials, which include operation and maintenance data, to be retained by each trainee.

#### Permit all training sessions to be videotaped by the Region if required by the Region.

### Training Schedule:

#### List the specified equipment and systems that require training services and show the following information:

##### The respective manufacturer;

##### Estimated dates for completion of the installation; and

##### Estimated training dates.

#### Allow for multiple sessions when several shifts are involved.

#### Adjust the schedule to ensure the training of appropriate personnel as deemed necessary by the Region, and to allow for full participation by the manufacturers’ representatives. Adjust the schedule for any interruptions in the operability of equipment.

#### Coordinate training activities in accordance with the requirements of Section 01310 - Progress Schedules, and Section 01810 - Equipment Testing and Facility Commissioning.

### Lesson Plan: When manufacturer or vendor training of the Region’s personnel is specified in the Contract Documents, prepare a lesson plan for each required course, containing the following information, at a minimum:

#### Title and objectives.

#### Recommended types of attendees (for example, managers, engineers, operators, maintenance personnel).

#### Course description and outline of course content.

#### Format (for example, lecture, self-study, demonstration, hands on).

#### Instruction materials and equipment requirements.

#### Resumés of the instructors providing the training.

#### Documented student assessment forms that demonstrates the attendees successful comprehension of the material and sign-off by the instructor validating the results.

### Specialized Training Requirements

#### Where specified in the Contract Documents, specialized training for complete systems requires such training to be accredited for Continuing Education Units (CEU’s) and be Director Approved by the Ontario Water Wastewater Certification Office (OWWCO).

#### Manufacturer’s representatives shall provide all necessary information and documentation to the training instructor in order to comply with Ministry requirements to acquire Director Approved Training designation.

#### The Contractor shall obtain the services of qualified trainers or training organization or the Consultant to provide such specialized training and activities required to obtain course accreditation.

#### Refer to MOECC web site for accredited training requirements as below:

### Pre-startup Training:

#### Coordinate training sessions with the Region’s operating personnel and the manufacturers’ representatives, and with the submission of the operation and maintenance manuals in accordance with Section 01430 - Operation and Maintenance Data.

#### Complete the training sessions a minimum of 14 Days prior to the commencement of facility startup.

### Post Startup Training:

#### If required in the individual Specifications Sections, provide and coordinate training of the Region’s operating personnel by the respective manufacturer’s representatives.

## Supplements

### The supplements listed below, attached following “END OF SECTION”, forms part of this Section.

#### Forms: Manufacturer’s Certificate of Proper Installation.

**END OF SECTION**

**MANUFACTURER’S CERTIFICATE OF PROPER INSTALLATION**

|  |  |
| --- | --- |
| REGION | EQPT SERIAL NO: |
| EQPT TAG NO: | EQPT/SYSTEM: |
| PROJECT NO: | SPEC. SECTION: |
| I hereby certify that the above-referenced equipment/system has been:  (Manufacturer’s Representative to address each box and provide full explanation of any variance)  Installed in accordance with the Manufacturer’s recommendations.  Inspected, checked, and adjusted.  Serviced with the proper initial lubricants.  Electrical and mechanical connections meet quality and safety standards.  All applicable safety equipment has been properly installed.  Functional tests. Provide documentation of functional tests.  System has been performance tested, and meets or exceeds the specified   performance requirements. Provide all performance test documentation which includes verification of meeting design performance requirements. (When complete system of one manufacturer) | |
| Comments: | |
| I, the undersigned Manufacturer’s Representative, hereby certify that I am (i) a duly authorized representative of the manufacturer, (ii) authorized by the manufacturer to inspect, approve, and operate its equipment and (iii) authorized to make recommendations required to ensure that the equipment furnished by the manufacturer is complete and operational, except as may be otherwise indicated herein. I further certify that all information contained herein is true and accurate. | |
| Date: , 20\_\_\_ |  |
| Manufacturer:  By Manufacturer’s Authorized Representative:  Print Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (Manufacturer’s Authorized Signature) | |
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