

**Part 1            General**

**1.1                RELATED SECTIONS**

- .1        Section 01 78 00 – Closeout Submittals.

**1.2                ADMINISTRATIVE**

- .1        Submit to Contract Administrator 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 submittals 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 Contract Administrator. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated 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 Contract Administrator, 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 is coordinated.
- .8        Contractor's responsibility for errors and omissions in submission is not relieved by Contract Administrator's review of submittals.
- .9        Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator's review.
- .10      Keep one reviewed copy of each submission on Site.
- .11      Provide Contract Administrator with Request for Information (RFI) for required approvals.

**1.3                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 1 electronic copy (pdf) of all shop drawings and product data sheets or brochures for requirements in specifications Sections or on drawings and as requested by Contract

Administrator where shop drawings will not be prepared due to standardized manufacture of product.

- .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 co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow 5 days for Contract Administrator's review of each submission.
- .5 Adjustments made on shop drawings by Contract Administrator are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Contract Administrator prior to proceeding with Work.
- .6 Make changes in shop drawings as Contract Administrator may require, consistent with Contract Documents. When resubmitting, notify Contract Administrator in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter 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 Contractor Administrator's review, distribute copies to Subcontractors as required.
- .10 Delete information not applicable to project.
- .11 Supplement standard information to provide details applicable to project.
- .12 If upon review by Contract Administrator, 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.
- .13 The review of shop drawings by the Contract Administrator is for sole purpose of ascertaining conformance with general concept. This review shall not mean that Contract Administrator approves 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 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 sub-trades.

#### **1.4 SAMPLES**

- .1 Submit for review samples as requested in respective specification Sections or on Drawings. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Contract Administrator's office.
- .3 Notify Contract Administrator 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 Contract Administrator are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Contract Administrator prior to proceeding with Work.
- .6 Make changes in samples which Contract Administrator 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.

#### **1.5 MOCK-UPS**

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

**1.6 PHOTOGRAPHIC DOCUMENTATION**

- .1 Submit electronic copy of digital photography in jpg format, monthly with progress statement and as directed by Contract Administrator.
- .2 Project identification: name and number of project and date of exposure indicated.
- .3 Record of Existing Conditions.
  - .1 Number of viewpoints: sufficient views and proximity to clearly indicate condition of existing building subject to damage from Work under this Contract.
  - .2 Frequency: before construction proceeds.
- .4 Construction Progress Record.
  - .1 Number of viewpoints: sufficient views and proximity to clearly indicate stages of completion of all work and services before concealment.
  - .2 Frequency: monthly with progress statement.
- .5 As-Built Record.
  - .1 Number of viewpoints: all interior elevations.
  - .2 Frequency: with final payment invoice.

**Part 2 Products**

**2.1 SUBSTITUTES**

- .1 Refer to City of Winnipeg Bid Opportunity No. 936-2016; Section B7 SUBSTITUTES.

**Part 3 Execution**

N/A

**END OF SECTION**

**Part 1            General**

**1.1                INSPECTION**

- .1    Allow Contract Administrator access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2    Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Contract Administrator's instructions, or law of Place of Work. Provide photo documentation where applicable in accordance with 01 33 00 – Submittal Procedures.
- .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.
- .4    Contract Administrator may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such Work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Contract Administrator shall pay cost of examination and replacement.

**1.2                INDEPENDENT INSPECTION AGENCIES**

- .1    Independent Inspection/Testing Agencies may be engaged by Contract Administrator for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Contractor.
- .2    Provide equipment required for executing inspection and testing by appointed agencies.
- .3    Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4    If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Contract Administrator at no cost to Contract Administrator. Pay costs for retesting and re-inspection.

**1.3                ACCESS TO WORK**

- .1    Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2    Co-operate to provide reasonable facilities for such access.

**1.4                PROCEDURES**

- .1    Notify appropriate agency and Contract Administrator in advance of requirement for tests, in order that attendance arrangements can be made.

- .2 Submit samples and/or materials required for testing, as specifically requested in specifications or on drawings. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on Site. Provide sufficient space to store and cure test samples.

#### **1.5 REJECTED WORK**

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Contract Administrator as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in opinion of Contract Administrator it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, The City may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Contract Administrator.

#### **1.6 REPORTS**

- .1 Submit 1 electronic copy (pdf) of inspection and test reports to Contract Administrator.
- .2 Provide copies to Subcontractor of Work being inspected or tested, manufacturer or fabricator of material being inspected or tested.

#### **1.7 MOCK-UPS**

- .1 Prepare mock-ups for Work specifically requested in specifications or on drawings. Include for Work of Sections required to provide mock-ups.
- .2 Construct in locations acceptable to Contract Administrator.
- .3 Prepare mock-ups for Contractor Administrator's review with reasonable promptness and in orderly sequence, to not cause delays in Work.
- .4 Failure to prepare mock-ups 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.
- .5 If requested, Contract Administrator will assist in preparing schedule fixing dates for preparation.
- .6 Remove mock-up at conclusion of Work or when acceptable to Contract Administrator.
- .7 Mock-ups may remain as part of Work.

**Part 2**      **Products**  
N/A

**Part 3**      **Execution**  
N/A

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES**

- .1        Within text of each specifications section or on drawing, reference may be made to reference standards. Conform to these reference standards, in whole or in part as specifically requested in specifications or on drawings.
- .2        If there is question as to whether products or systems are in conformance with applicable standards, Contract Administrator reserves right to have such products or systems tested to prove or disprove conformance.
- .3        Cost for such testing will be borne by Contractor in event of conformance with Contract Documents or by Contractor in event of non-conformance.

**1.2                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 for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2        Defective products, whenever identified prior to completion of Work, 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 Contract Administrator based upon requirements of Contract Documents.
- .4        Unless otherwise indicated in specifications or on drawings, maintain uniformity of manufacture for any particular or like item throughout building.
- .5        Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

**1.3                AVAILABILITY**

- .1        Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Contract Administrator of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2        In event of failure to notify Contract Administrator at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Contract Administrator reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.



**1.4 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 seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Contract Administrator.
- .9 Touch-up damaged factory finished surfaces to Contract Administrator's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

**1.5 TRANSPORTATION**

- .1 Pay costs of transportation of products required in performance of Work.

**1.6 MANUFACTURER'S INSTRUCTIONS**

- .1 Unless otherwise indicated in specifications or on drawings, 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 Contractor Administrator in writing, of conflicts between specifications and manufacturer's instructions, so that Contract Administrator will establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Contract Administrator to require removal and re-installation at no increase in Contract Price or Contract Time.

**1.7 QUALITY OF WORK**

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Contract Administrator if required Work is such as to make it impractical to produce required results.

- .2 Do not employ anyone unskilled in their required duties. Contract Administrator reserves right to require dismissal from Site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Contract Administrator, whose decision is final.

#### **1.8 CO-ORDINATION**

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

#### **1.9 CONCEALMENT**

- .1 In finished areas conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation inform Contract Administrator if there is interference. Install as directed by Contract Administrator.

#### **1.10 REMEDIAL WORK**

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

#### **1.11 LOCATION OF FIXTURES**

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform Contract Administrator of conflicting installation. Install as directed.

#### **1.12 FASTENINGS**

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.

- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

**1.13 FASTENINGS - EQUIPMENT**

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

**1.14 PROTECTION OF WORK IN PROGRESS**

- .1 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of Contract Administrator.

**1.15 EXISTING UTILITIES**

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

**Part 2 Products**  
N/A

**Part 3 Execution**  
N/A

**END OF SECTION**

**Part 1            General**

**1.1                POLLUTION CONTROL**

- .1 Prevent dust and noxious or hazardous gases from contaminating air beyond construction area, by providing temporary enclosures and/or other control methods. If necessary, arrange with The City for shutdown of air handling units which have air intakes in the vicinity of Work.
- .2 Take precautions to prevent dust from triggering fire alarm smoke detectors and plugging ducts and filters. If necessary, arrange with The City for shutdown of these systems or equipment prior to construction. Contractor to be responsible for all damages.
- .3 Prior to start of Work, identify locations of air intakes and air-cooled mechanical and electrical equipment adjacent to the area of Work and protect them from entry of dust and air borne particles from construction activity.
- .4 Store flammable liquids in ULC approved containers. Remove flammable or combustible wastes from premises daily.

**1.2                WASTE MANAGEMENT**

- .1 Provide on-site covered commercial waste containers for collection of non-hazardous waste materials and debris.
- .2 Keep containers covered to minimize spread of dust or other contaminants. Deposit waste in containers as work progresses. Remove waste at regular intervals during construction and at end of each working day. Do not allow waste to build up outside of approved waste containers at any time.
- .3 Place materials defined as hazardous, volatile, or toxic waste in special metal containers designated for hazardous waste and dispose of at end of each working day.
- .4 Waste Management and Disposal
  - .1 Separate and recycle packaging and waste materials to maximum extent economically possible.
  - .2 Collect and separate plastic, paper packaging, and corrugated cardboard in designated areas for recycling as work proceeds and completion of the Work.
  - .3 Set aside damaged wood and dimensional lumber off-cuts for approved alternative uses (e.g. blocking).
  - .4 Place materials defined as hazardous or toxic waste in designated containers.
  - .5 Close and seal tightly, all partly used sealant containers and store protected in well ventilated fire-safe area at moderate temperatures.
  - .6 Place used sealant tubes and other containers in areas designated for hazardous materials.
  - .7 Unused paint, caulking, and sealing compound materials must be disposed of at an official hazardous material collections site in accordance with legislation and authorities having jurisdiction. Do not dispose into sewer system, onto ground or in other location where it will pose health or environmental hazard.

- .8 Ensure all emptied containers are sealed and stored safely for disposal.
- .9 Fold up metal banding, flatten and place in designated area for recycling.
- .10 Plan and coordinate insulation work to minimize generation of waste.
- .11 Designate on-site location for containers which facilitate recyclable materials without hindering daily operations.

**1.3 DISPOSAL OF NON-HAZARDOUS WASTER**

- .1 Obtain approval and pay for use of off-site municipal collection or local dump or sanitary landfill sites, depending upon materials involved in accordance with authorities having jurisdiction.
- .2 Where recycling is available, collect waste by type and coordinate pickup or delivery to recycling or collection facility.

**1.4 DISPOSAL OF HAZARDOUS WASTE**

- .1 Obtain legislation governing disposal of hazardous and toxic materials, and pay for disposal of these materials in accordance with this legislation and authorities having jurisdiction and requirements of contract documents
- .2 Do not dispose of water or volatile materials such as: mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers.

**1.5 WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEMS**

- .1 Comply with The City’s WHIMIS regulations when handling controlled cleaning products on site. Maintain copies of the controlled cleaning product Materials Safety Data Sheets (MSDS) on Site and submit one copy to the Contract Administrator for record.
- .2 Secure MSDS relating to specified products or other regulated products and materials that will be used on the Work site, including those materials not specified herein. Maintain file of MSDS sheets at the Site office.
- .3 Submit one copy (pdf) of all pertinent MSDS at award of Contract and as work progresses to Contract Administrator.
- .4 Make available all hazard information and warnings related to products specified as well as other products not specified but used.
- .5 Storage of hazardous materials on or around the Site will not be allowed.

**Part 2 Products**  
N/A

**Part 3 Execution**

**3.1 PROJECT CLEANLINESS**

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris.

- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Contract Administrator. Do not burn waste materials on site.
- .3 Coordinate cleaning operations with disposal operations to prevent accumulation of dust, dirt, debris, rubbish, and waste materials that will create hazardous conditions.
- .4 Clear snow and ice from access to building if necessary.
- .5 Provide on-site containers for collection of waste materials and debris.
- .6 Vacuum clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations. Continue vacuum cleaning on an as-needed basis until Site is ready for Substantial Performance.
- .7 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .8 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .9 Schedule cleaning operations so that resulting dust and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

### **3.2 CLEANING CONDITION OF WORK SITE BEFORE CANADA SUMMER GAMES**

- .1 Follow the cleaning requirements of the Site in accordance to D15.3.

### **3.3 CLEANING BEFORE SUBSTANTIAL PERFORMANCE INSPECTION**

- .1 When Work is Substantially Performed and prior to the Canada Summer Games, remove surplus products, tools, construction machinery and equipment. If Substantial Performance is not achieved by this date, still remove surplus products, tools, construction machinery and equipment prior to final review.
- .2 Remove waste products and debris, vacuum clean and dust building interiors, and leave construction area clean.
- .3 Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from site-exposed finished surfaces including glass and other polished surfaces.
- .4 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and 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, windows, and floors.
- .6 Use only cleaning materials recommended by manufacture of surface to be cleaned, and as recommended by cleaning material manufacture.

**3.4 FINAL CLEANING AFTER CANADA SUMMER GAMES**

- .1 When Work is Totally Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris, vacuum clean and dust building interiors, and leave construction area clean.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and 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, windows, and floors.
- .6 Prepare floor finishes, as recommended by manufacturer.
- .7 Use only cleaning materials recommended by manufacture of surface to be cleaned, and as recommended by cleaning material manufacture.

**END OF SECTION**

**Part 1            General**

**1.1                RELATED SECTIONS**

- .1            Section 01 78 00 – Closeout Submittals.

**1.2                INSPECTION AND DECLARATION**

- .1            Contractor's Inspection: Contractor and all Subcontractors shall conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
  - .1            Notify Contract Administrator in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
  - .2            Request Contract Administrator's inspection.
- .2            Contract Administrator's Inspection:
  - .1            Contract Administrator and Contractor to inspect Work and identify defects and deficiencies.
  - .2            Contractor to correct Work as directed.
- .3            Completion Tasks: submit written certificates in English that tasks have been performed as follows:
  - .1            Work: completed and inspected for compliance with Contract Documents.
  - .2            Defects: corrected and deficiencies completed.
  - .3            Equipment and systems: tested, adjusted and fully operational.
  - .4            Operation of systems: demonstrated to the Aquatic Hall of Fame personnel and The City's personnel.
  - .5            Work: complete and ready for Final Inspection.
- .4            Final Inspection:
  - .1            When completion tasks are done, request final inspection of Work by Contract Administrator and Contractor.
  - .2            If Work deemed incomplete according to Contract Administrator, complete outstanding items and request Contract Administrator re-inspection.
- .5            Declaration of Substantial Performance: when Contract Administrator considers deficiencies and defects corrected and requirements of Contract substantially performed, make application for Certificate of Substantial Performance.
- .6            Commencement of Lien and Warranty Periods: date of The City's acceptance of submitted declaration of Total Performance to be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.
- .7            Final Payment:
  - .1            When Contract Administrator considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.



- .2 If Work deemed incomplete by Contract Administrator, complete outstanding items and request Contract Administrator re-inspection.

**1.3 FINAL CLEANING**

- .1 Clean in accordance with Section 01 74 00 – Cleaning and Waste Management.

**Part 2 Products**  
N/A

**Part 3 Execution**  
N/A

**END OF SECTION**

**Part 1            General**

**1.1                RELATED SECTIONS**

- .1        Section 01 77 00 – Closeout Procedures.
- .2        Section 01 33 00 – Submittal Procedures.

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

- .1        Two weeks prior to Substantial Performance of the Work, submit to the Contract Administrator, four final copies of operating and maintenance manuals for each architectural, mechanical, and electrical component of the Work in English.
- .2        In addition, provide as-built documents, spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .3        Provide evidence, if requested, for type, source and quality of products supplied.

**1.3                OPERATING AND MAINTENANCE - FORMAT**

- .1        Organize data as instructional manual.
- .2        Binders: vinyl, hard covered, 3 'D' ring, loose leaf (8-1/2" x 11") with spine and face pockets.
- .3        When multiple binders are used correlate data into related consistent groupings.
  - .1        Identify contents of each binder on spine.
- .4        Cover: identify each binder with type or printed title 'Operating and Maintenance Manual'; list title of project and identify subject matter of contents.
- .5        Arrange content by systems under Section numbers and sequence of Table of Contents.
- .6        Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7        Text: manufacturer's printed data, or typewritten data.
- .8        Drawings: provide with reinforced punched binder tab.
  - .1        Bind in with text; fold larger drawings to size of text pages.
- .9        Provide 1:1 scaled CAD files in .dwg format on CD; 4 copies.

**1.4                OPERATING AND MAINTENANCE - CONTENTS**

- .1        Table of Contents for Each Volume: provide title of project;
  - .1        Date of submission; names.
  - .2        Addresses, and telephone numbers of Contract Administrator with name of responsible parties.

- .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
  - .1 List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data.
  - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- .6 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

## **1.5 PROJECT RECORD DOCUMENTS**

- .1 In addition to requirements in General Conditions, maintain at construction Site, one set of Contract Drawings and Specifications for record purposes. Mark set "PROJECT RECORD DOCUMENTS" that includes:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Change Orders and other modifications to Contract.
  - .5 Reviewed shop drawings, product data, and samples.
  - .6 Field test records.
  - .7 Inspection certificates.
  - .8 Manufacturer's certificates.
- .2 Store Record Drawings and Specifications in field office apart from other documents used in construction. Maintain Record Drawings and Specifications in clean, dry, and legible condition. Do not use Record Drawings and Specifications for construction purposes.
- .3 Record "as-built" information in red ink, accurately and concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings: legibly mark each item to record actual construction including
  - .1 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
  - .2 Field changes of dimension and detail.
  - .3 Changes made by Addendum, Change Order, or Field Instruction.
  - .4 Details not on original Contract Drawings.
  - .5 References to related shop drawings and modifications.
- .5 Specifications: legibly mark each item to record and actual construction, including:

- .1 Manufacture, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
- .2 Changes made by Addenda, Change Order or Field Instruction.
- .6 At completion of project and prior to Substantial Performance, submit Project Record Documents to Contract Administrator for review. In addition, submit AutoCAD disks with all changes redlined to reflect “as-built” conditions. Drawings must be generated in most current AutoCAD version, or at minimum AutoCAD version 2013, and consistent with Contract Documents prepared in AutoCAD 2015.
- .7 Other Documents: maintain manufacturer’s certifications, inspection certifications, field test records, required by individual specifications Sections.
- .8 Keep record documents and samples available for inspection by Contract Administrator.
- .9 Provide digital photos, if requested by Contract Administrator, for site records.

**1.6 SPARE PARTS, MAINTENANCE MATERIALS AND SPECIAL TOOLS**

- .1 Provide spare parts, maintenance and extra materials, in quantities specified in individual specification Sections or on drawings.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Provide special tool items with tags identifying their associated function and equipment.
- .4 Deliver to Site; place and store.
- .5 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .6 Store in original and undamaged condition with manufacturer's seal and labels intact
- .7 Obtain receipt for delivered products and submit prior to final payment.

**1.7 EQUIPMENT AND SYSTEMS**

- .1 For each item of equipment and each system include description of unit or system, and component parts. Give function, normal operation characteristics and limiting conditions.
- .2 Include manufacturer's printed operation and maintenance instructions.
- .3 Additional requirements: as specified in individual specification sections or on drawings.

**1.8 WARRANTIES AND BONDS**

- .1 Assemble warranty information in Operating and Maintenance manuals. Organize binder as follows:
  - .1 Separate each warranty with index tab sheets keyed to Table of Contents listing.
  - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

- .3 Obtain warranties, executed in duplicate by Subcontractors, suppliers, and manufacturers, within ten calendar days after completion of applicable item of work.
- .4 Verify that documents are in proper form, contain full information, and are notarized.
- .5 Co-execute submittals when required.
- .6 Retain warranties and bonds until time specified for submittal.
- .2 Conduct joint 11 month warranty inspection, measured from time of acceptance, by Contract Administrator.
- .3 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .4 Written verification to follow oral instructions.
  - .1 Failure to respond will be cause for the Contract Administrator to proceed with action against Contractor.

**Part 2**      **Products**  
N/A

**Part 3**      **Execution**  
N/A

**END OF SECTION**