

## DIVISION 1

### SECTION 01000 – PROJECT SUMMARY

#### PART 1 - GENERAL

##### 1.01 Scope

- A. This section contains general requirements that are applicable to this project.

##### 1.02 Description of Work

- A. The Contractor shall provide all labor, materials and equipment necessary to perform the work items called for on the bid schedule.

##### 1.03 City Furnished Materials

- A. None.

##### 1.04 Conditions of Work

- A. Area of Work: The Contractor shall confine his operations to the immediate work area. Material storage shall be confined to areas shown on the Drawings or designated by the City.
- B. Regulations: The Contractor shall comply with all applicable Federal, State, and local regulations pertaining to safety, traffic control, fire prevention, erosion control and environmental protection.
- C. Working Hours: The Contractor's working hours shall be between 7:00 a.m. and 5:00 p.m., with no work on weekends or Federal holidays, unless otherwise approved by the City.
- D. Material Storage: The Contractor's material and equipment storage site shall be limited to the area of the project site. The area shall be kept orderly and free of litter.

##### 1.05 Project Cleanup

- A. The Contractor is responsible to maintain the construction site in a clean and orderly condition from the start of the project to completion. Daily cleanups are required.
  - 1. The City may require Contractor to perform cleanup within 100 feet of the progress of the work and perform cleanup of the site daily prior to work stoppage.
- B. Store volatile wastes in covered containers and dispose off-site.
  - 1. Provide on-site covered containers for the collection of waste materials, debris and rubbish.
  - 2. Neatly store construction materials, such as concrete forms, when not in use.
- C. Wastes shall not be buried or burned on the site or disposed of into storm drains, sanitary sewers, streams or waterways.
- D. At project completion the Contractor shall remove all equipment, materials, and debris from the site including toilets and dumpsters. Areas around work sites shall be cleaned with dirt and grass surfaces raked clean of any slag from the Contractor's operations. Broom clean exterior paved surfaces.

##### 1.06 Trash Removal

- A. All non-salvageable items and trash shall be hauled off the site and disposed of in accordance with applicable state and local regulations. Items shall be transported in tarp-covered or closed vehicles. Any materials dropped or blown off vehicles shall be picked up immediately by Contractor.

### **1.07 Verification of Dimensions**

- A. The Contractor shall be responsible for the coordination and proper relation of the work. He shall field verify all dimensions and advise the City of any discrepancies prior to proceeding with that phase of the work.

### **1.08 Fire Hydrants**

- A. Fire Hydrant Connections: City's permission is required for connection to fire hydrants. Only compatible adapters shall be utilized for hydrant connections. A gate valve shall be provided and installed by the Contractor between the hydrant and supply hoses to control flow. Connection shall include backflow protection. Temporary connections to fire hydrants shall be disconnected at the end of each working day. No quick closing valves such as plug or butterfly valves will be used.

### **1.09 Outages**

- A. Utility outages necessitated by the work shall be requested in writing at least fifteen (15) working days prior to the proposed outage. The request shall be directed to the City and shall stipulate the specific utility system(s) and circuits to be affected, the location of the work, the time at which the shutdown will occur, and the duration of the outage for each system. Outages shall be kept to a minimum both in number and in duration. Where multiple outages are required, as many outages as can be accurately scheduled shall be submitted as a group.

### **1.10 Fill Material**

- A. Excess fill material, including rock, gravel, sod, broken concrete or asphalt, plaster, etc., shall be hauled off the site and disposed of in accordance with applicable State and local regulations.
- B. Additional fill material, if required, shall be hauled to the site from off the site as a necessary part of the work. Material composition shall be subject to the requirements of the specifications.

### **1.11 Parking**

- A. Parking of the Contractor's vehicles shall be restricted to an area designated by the City.

### **1.12 Telephone**

- A. Business Telephone: At the beginning of construction, the Contractor shall provide the City with a telephone number at which the Contractor or his representative may be contacted at any time during regular working hours. The Contractor shall also provide a phone number for after-duty hours contact.

### **1.13 Sanitary Provisions**

- A. The Contractor shall provide temporary toilets for the use of construction personnel. Location, type, proposed maintenance, etc., shall be approved by the City prior to placing toilets. Temporary toilets shall be removed at the completion of construction and the adjacent area restored to the condition existing prior to the start of construction or as indicated on the plans.

### **1.14 Pollution Abatement**

- A. Transporting materials to or from the site shall be accomplished in a manner preventing materials or particles from becoming airborne. Earth materials shall be covered, wetted or otherwise protected. Gravel, sand and concrete shall be contained within vehicles to prevent spillage.
- B. Prevent the deposit of dirt, mud or debris on improved streets and roads, and remove all should such deposition occur.
- C. Burning of any material on site is prohibited.
- D. Stream beds, lakes, drainage ways, sanitary and storm sewers, etc., shall not be polluted by fuels, oils, bitumen, acids, or other harmful materials. Surface drainage from the construction site, which contains harmful amounts of sediment, shall not be allowed to drain onto adjacent areas. All grading shall be accomplished to allow sedimentation to settle out prior to flowing onto adjacent areas.

- E. Flushing of concrete trucks is allowed only at the project site or the designated contractor storage area, with the responsibility of control and cleanup resting with the Contractor.
- F. Toxic, corrosive and flammable materials for construction other than specified shall not be used without prior approval of the City of Fort Collins. When approved, disposal of these materials or their containers will be off site and conform to state and federal regulations.

**1.15 Protection of Property**

- A. Initiate, maintain and supervise necessary protection to prevent damage, injury or loss to:
  - 1. The Work and materials and equipment to be incorporated in the project, whether in storage on or off the site: and
  - 2. Property at the site or adjacent thereto, including fences, patios, driveways, sidewalks, pavement, trees, shrubs, lawns, walks, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.
- B. Maintain, protect, and support existing utilities and other appurtenances against damage by shoring, bracing, or other means.
- C. Do not stockpile excavated material against existing appurtenances.

**1.16 Survey Requirements**

- A. Contractor shall be responsible for construction staking necessary for proper and accurate completion of the work covered by this contract. The Contractor shall provide experienced instrument personnel, competent assistants, and such instruments, tools, stakes, and other materials required to complete the survey, layout, and measurement Work. Survey work shall be performed under the direction of a licensed professional surveyor in the State of Colorado. In addition, Contractor shall furnish, without charge, competent personnel and such tools, stakes, and other materials as Engineer may require in checking survey, layout, and measurement Work performed by the Contractor.
- B. All work shall be performed to the lines, grades, and elevations shown on the Drawings. When construction falls within the following tolerances, the installation will be acceptable to the Owner, with respect to the lines and grades. If the tolerances are not met, the Contractor shall be responsible for performing modifications to the facilities to bring the project components into the tolerances.

Description:	Maximum Permissible Deviation from Alignment and Elevation shown on the Drawings:
Horizontal location of structures & playground features	0.05 feet
Horizontal location of paved areas & underground installations	0.10 feet
Horizontal location of grading & surface features (i.e. berms, swales, etc.)	0.50 feet
Vertical elevation of structures & playground features	0.05 feet
Vertical elevation of paved areas	0.05 feet
Vertical elevation of underground installations	0.05 feet
Vertical elevation of grading & surface features (i.e. berms, swales, etc.)	0.10 feet

- C. Contractor shall remove and reconstruct Work that is improperly located. Horizontal and vertical alignments shall be checked regularly as the Work progresses. Contractor shall report results to the Engineer.
- D. If the construction survey uncovers any discrepancies, the Contractor shall notify the Engineer, in writing, prior to construction proceeding. If the Contractor proceeds with work that includes apparent discrepancies without resolution by the Engineer, he assumes full responsibility for any subsequent necessary modifications.

**1.17 Construction Superintendent**

- A. The construction superintendent shall be at the job site any time work is being accomplished by any of the trades per General Conditions including, but not limited to, Article 6.

PART 2 - MATERIALS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

PART 4 - MEASUREMENT & PAYMENT (Not Applicable)

**END OF SECTION**

## DIVISION 1

### SECTION 01100 - SUMMARY OF WORK

#### PART 1 - GENERAL

##### 1.01 Description of Work

- A. The City of Fort Collins **Stewart Case Park – Site Improvements** project is located on 2351 Pinecone Cr., northeast from Fort Collins High School in Fort Collins, Colorado. The work for the project includes demolition; earthwork grading; concrete installation: picnic shelter; boulder setting; soil preparation and fine grading; irrigation; landscaping; installation of site furnishings and miscellaneous items of work. The park site is approximately 15 acres in size of which 5-6 acres will be disturbed and constructed upon.
- B. Protection and Restoration.
  - 1. Replace to equal or better conditions all items removed and replaced or damaged during construction. Restore all areas disturbed to match surrounding surface conditions.

##### 1.02 Notices to Private Owners and Authorities

- A. Notify private owners of adjacent property, utilities, affected governmental agencies, and school district when execution of the work may affect them.
- B. Give notification 48 hours in advance to enable affected persons to provide for their needs when it is necessary to temporarily deny access or services.
- C. Contact utilities at least 48 hours prior to excavating near underground utilities.
- D. Contact all agencies at least 72 hours prior to start of construction. Notify all agencies of the proposed scope of work schedule and any items that would affect their daily operation.
- E. Names and telephone numbers of affected agencies and utilities in the area are listed below for Contractor's convenience.

Water - City of Fort Collins, Colorado 221-6681

Storm Sewer - City of Fort Collins, Colorado 221-6605

Sanitary Sewer - City of Fort Collins, Colorado 221-6681

Electrical - City of Fort Collins, Colorado 482-5922, 221-8553

Gas - Public Service Company of Colorado 482-5922, 221-8553

Telephone - U.S. West Communications 484-0300, 226-6310

Roads - City of Ft. Collins, Colorado 221-6815

Cable Television – AT&T Cable Services 493-7400

Utility Locates - One-call System 1-800-922-1987

Safety - Occupational Safety and Health Administration (OSHA) 844-3061

Fire - Poudre Fire Authority Non-Emergency 221-6581/ Emergency 911

Police - City of Fort Collins Police Department Non-Emergency 221-6550 / Emergency 911

Larimer County Sheriff's Department - Non-Emergency 221-7177

Postmaster - United States Postal Service 482-2837

Ambulance - Poudre Valley Hospital Non-Emergency 484-1227 / Emergency 911

Public Transportation - TransFort 221-6620

Traffic Control - Traffic Engineering 221-6815

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT (Not Used)

**END OF SECTION**

## **DIVISION 1**

### **SECTION 01160 – SITE CONDITIONS**

#### **PART 1 - SITE INVESTIGATIONS AND REPRESENTATION**

##### **1.01 General Investigations**

- A. The Contractor acknowledges that he has satisfied himself as to the nature and location of the work, the general and local conditions, particularly those bearing upon access to the site; handling, storage, and disposal of materials; availability of water, electricity and roads; uncertainties of weather, or similar physical conditions at the site; the conformation and conditions of the ground; the equipment and facilities needed preliminary to and during the execution of the work; and all other matters which can in any way affect the work or the cost thereof under this Contract.

##### **1.02 Soil Conditions**

- A. The Contractor further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials to be encountered from his inspection of the site and from reviewing any available records of exploratory work furnished by the Owner or included in these Documents. Failure by the Contractor to acquaint himself with the physical conditions of the site and all the available information will not relieve him from responsibility for properly estimating the difficulty or cost of successfully performing the work.

##### **1.03 Contractor Representation**

- A. The Contractor warrants that as a result of his examination and investigation of all the aforesaid data that he can perform the work in a good and workmanlike manner and to the satisfaction of the Owner. The Owner assumes no responsibility for any representations made by any of its officers or agents during or prior to the execution of this Contract, unless (1) such representations are expressly stated in the Contract, and (2) the Contract expressly provides that the responsibility therefore is assumed by the Owner.

#### **PART 2 - INFORMATION ON SITE CONDITIONS**

##### **2.01 General**

Any information obtained by the Engineer regarding site conditions, subsurface information, groundwater elevations, existing construction of site facilities, and similar data will be available for inspection, as applicable, at the office of the Engineer upon request. Such information is offered as supplementary information only. Neither the Engineer nor the Owner assumes any responsibility for the completeness or interpretation of such supplementary information.

- A. Differing Subsurface Conditions:
  - 1. In the event that the subsurface or latent physical conditions are found materially different from those indicated in these Documents, and differing materially from those ordinarily encountered and generally recognized as inherent in the character of work covered in these Contract Documents, the Contractor shall promptly, and before such conditions are disturbed, notify the Owner in writing of such changed conditions.
  - 2. The Engineer will investigate such conditions promptly and following this investigation, the Contractor shall proceed with the work, unless otherwise instructed by the Engineer. If the Engineer finds that such conditions do so materially differ and cause an increase or decrease in the cost of or in the time required for performing the work, the Engineer will recommend to the Owner the amount of adjustment in cost and time he considers reasonable. The Owner will make the final decision on all Change Orders to the Contract regarding any adjustment in cost or time for completion.

B. Underground Utilities:

1. Known utilities and structures adjacent to or encountered in the work are shown on the Drawings. The locations shown are taken from existing records and the best information available from existing utility plans, however, it is expected that there may be some discrepancies and omissions in the locations and quantities of utilities and structures shown. Those shown are for the convenience of the Contractor only, and no responsibility is assumed by either the Owner or the Engineer for their accuracy or completeness.

**PART 3 - CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE**

**3.01 General**

- A. Where the Contractor's operations could cause damage or inconvenience to railway, telegraph, telephone, television, oil, gas, electricity, water, sewer, or irrigation systems, the operations shall be suspended until all arrangements necessary for the protection of these utilities and services have been made by the Contractor.
- B. Notify all utility offices which are affected by the construction operation at least 48 hours in advance. Under no circumstances expose any utility without first obtaining permission from the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for all existing underground utilities.
- C. The Contractor shall protect all utility poles from damage. If interference of power poles, telephone poles, guy wires, or anchors is encountered, notify the Owner's Representative and the appropriate utility company at least 48 hours in advance of construction operations to permit the necessary arrangements for protection or relocation of the interfering structure.
- D. The Contractor shall be solely and directly responsible to the Owner and operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage which may result from the construction operations under this Contract.
- E. Neither the Owner nor its officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the work.
- F. If the Contractor while performing the Contract discovers utility facilities not identified in the Drawings or Specifications, he shall immediately notify the Owners and the utility in writing.
- G. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, promptly notify the proper authority. Cooperate with said authority in the restoration of service as promptly as possible and bear all costs of repair. In no case shall interruption of any water or utility service be allowed to exist outside working hours unless prior approval is granted.
- H. The Contractor shall replace, at his own expense, any and all other existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract Documents or ordered by the Engineer.

**3.02 Interfering Structures**

- A. Take necessary precautions to prevent damage to existing structures whether on the surface, aboveground, or underground. An attempt has been made to show major structures on the Drawings. The completeness and accuracy cannot be guaranteed, and it is presented simply as a guide to avoid known possible difficulties.

**3.03 Field Relocation**

- A. During the progress of construction, it is expected that minor relocations of the work will be necessary. Such relocations shall be made only by direction of the Owner's Representative. If existing structures are encountered that prevent the construction, and that are not properly shown on the Drawings, notify the Owner's Representative before continuing with the construction in order that the Owner's Representative may make such field revision as necessary to avoid conflict with the existing structures.



If the Contractor shall fail to so notify the Owner's Representative when an existing structure is encountered, and shall proceed with the construction despite the interference, he shall do so at his own risk.

### **3.04 Easements**

- A. Easements and permits will be obtained by the Owner where portions of the work are located on public or private property. Easements will provide for the use of the property for construction purposes to the extent indicated on the easements. Copies of these easements and permits are available upon request to the Owner. It shall be the Contractor's responsibility to determine the adequacy of the easement obtained in every case and to abide by all requirements and provisions of the easement. The Contractor shall confine his construction operations to within the easement limits or make special arrangements with the property owners or appropriate public agency for the additional area required. Any damage to property, either inside or outside the limits of the easements provided by the Owner, shall be the responsibility of the Contractor as specified herein. The Contractor shall remove, protect, and replace all fences or other items encountered on public or private property. Before final payment will be authorized by the Owner's Representative, the Contractor will be required to furnish the Owner with written releases from property owners or public agencies where side agreements or special easements have been made by the Contractor or where the Contractor's operations, for any reason, have not been kept within the construction right-of-way obtained by the Owner.
- B. It is anticipated that the required easements and permits will be obtained before construction is started. However, should the procurement of any easement or permit be delayed, the Contractor shall schedule and perform the work around these areas until such a time as the easement or permit has been secured.

### **3.05 Land Monuments**

- A. The Contractor shall notify the Owner's Representative of any existing Federal, State, Town, County, and private land monuments encountered. Private monuments shall be preserved, or replaced by a licensed surveyor at the Contractor's expense. When Government monuments are encountered, the Contractor shall notify the Owner's Representative at least two (2) weeks in advance of the proposed construction in order that the Owner's Representative will have ample opportunity to notify the proper authority and reference these monuments for later replacement.

**END OF SECTION**

## **DIVISION 1**

### **SECTION 01300 – COORDINATION AND PROJECT MEETINGS**

#### **PART 1 - GENERAL**

##### **1.01 General**

- A. In order to provide for an orderly progression of work, all parties involved in the construction will meet at various times during the project to discuss pertinent items regarding the work.
- B. Coordinate operations under contract in a manner that will facilitate progress of the Work.
- C. Conform to the requirements of public utilities and concerned public agencies in respect to the timing and manner of performance of operations that affect the service of such utilities, agencies, or public safety.

##### **1.02 Conferences**

- A. The pre-construction conference will be held at a time to be determined by the Owner, after the award of the contract and prior to the issuance of the Notice to Proceed. The meeting will involve the Owner, the Engineer, the Contractor and representatives of the owners of utilities and other properties that will be directly affected by the work. Among the Contractor's representative on the site. The Contractor will have a complete construction schedule ready for review at the time of the pre-construction conference.
- B. Hold conferences for coordination of the Work when necessary.
- C. The City may hold coordination conferences to be attended by all involved when Contractor's operations affects, or is affected by, the work of others.

##### **1.03 Progress Meetings**

- A. Contractor and the City shall schedule and hold regular progress meetings at least weekly and at other times as requested by the City or required by the progress of the Work.
- B. Attendance shall include:
  - 1. Contractor and Superintendent
  - 2. Owners Representative
  - 3. Landscape Architect
  - 4. Others as may be requested by contractor, Landscape Architect or Owner
- C. Minimum Agenda shall include:
  - 1. Review of work progress since last meeting
  - 2. Identification and discussion of problems affecting progress
  - 3. Review of any pending change orders
  - 4. Revisions of Construction Schedule as appropriate

##### **1.04 Job Site Administration**

- A. Contract administration and construction observation services will be provided by the Owner. The Owner will make decisions regarding changes in the work and adjustments in contract quantities and/or unit prices.

**END OF SECTION**

## DIVISION 1

### SECTION 01310 - CONSTRUCTION SCHEDULES

#### PART 1 - GENERAL

##### 1.01 General

- A. It is the intent of the Owner to begin construction on approximately February 1, 2006. The signing of the contract and issuance of a Notice to Proceed will be completed promptly to accomplish that objective. The Notice to Proceed will authorize the Contractor to begin project administration and construction work on the site. Construction work shall not begin on site prior to the pre-construction conference.
- B. The Contractor shall complete all work, as specified in the Agreement, subject to the "Liquidated Damages" provision described under "Instructions to Bidders."
- C. Delays during project contract period outside control of the Contractor are subject to time extension consideration but not financial compensation unless such delay is significant enough to reasonably require Owner initiated work suspension (demobilization) as determined in the field by the Owner at the time of occurrence. See Paragraph 1.04 for requirements for modifying the Contract Time due to weather delays.
- D. Contractor shall plan and schedule his own work effort (personnel, equipment and material) to complete the project satisfactorily within the project time limits. Such schedule shall be in general conformance with the schedule submitted at the pre-construction conference. This includes the requirement that the Contractor conduct his operations to enable a shift of work effort from one part of the project to another to reasonably accommodate unexpected delays, and to conduct his daily operations so as to not create a public nuisance including but not limited to access or traffic obstruction, dust and mud generation, work outside of construction limits, noise, unsatisfactory cleanup or site restoration, unacceptable equipment/materials staging, flooding, etc. No work is to begin at the site until City's acceptance of the Construction Schedule.
- E. Contractor shall prepare and submit a Critical Path Method (CPM) schedule. The schedule shall show all work completed within the contract time and shall cover the time from the date of Notice to Proceed to the completion date. Contractor shall use Microsoft Project 2000 or approved equivalent to develop and manage the CPM schedule.
- F. Schedule shall include milestones that demonstrate the Contractor's approach to completing the project within project time limits. Milestones shall be of sufficient number to indicate regular progress of work and shall identify major components of the work. Milestones are subject to Owner approval prior to work beginning at the site. If Contractor fails to meet a milestone, contractor shall submit an updated schedule subject to Owner approval and demonstrate how the remaining milestones will be met. The Owner may order work shut down or suspended for nonconformance with the approved schedule (See Paragraph G. below)
- G. Milestones (minimum required items) The following items shall be indicated on the schedule with completion dates:
- H. The Contractor may voluntarily shut down or suspend work due to conditions beyond his control provided a minimum of 24 hours notice is provided to the Owner together with the reasons for subject suspension of work. The Contractor shall leave the project conditions in such a way so as not to cause a public nuisance or a threat to public safety. Neither remobilization costs nor additional time will be allowed for such suspension unless agreed to in writing in advance.
- I. The Owner or Engineer may order work shut down or suspended for such nonconformance issues as unsafe conditions, nonconformance with schedule, cause of public nuisance, unnecessary private property disturbance, materials and labor unsuited to the task, nonconformance to technical specifications, failure to comply with permits, etc. The Owner or Engineer will give a written warning to the Contractor with a specified deadline during which time the Contractor shall remedy the cause(s) described on the warning. Failure to do so shall justify the Owner or Engineer to order work shut down

or suspended. Such shutdown will not be compensated by cost reimbursement or time schedule adjustment.

- J. Failure to promptly execute the approved schedule in the judgment of the Owner will result in a written warning submitted to the Contractor explaining the specific compliance needed. Failure of the Contractor to remedy the noted items may be considered a breach of contract possibly leading to work shutdown for cause or contract termination.

### **1.02 Format and Submissions**

- A. Prepare Construction and Procurement schedules in a graphic format suitable for displaying schedule and actual progress.
- B. Submit two copies of each schedule to owner for review. Owner will return one copy to contractor with revisions suggested or necessary for coordination of the Work with the needs of Owner or others.

### **1.03 Progress Revisions**

- A. A schedule update shall be submitted to the Owner at each weekly progress meeting that will reflect work performed in the previous week and the upcoming two-(2) weeks. Schedule updates shall not change any Contract times.
- B. A complete schedule update shall be submitted with each application for progress payment.
- C. Show changes occurring since previous submission.
  - 1. Actual progress of each item to date.
  - 2. Revised projections of progress and completion.
- D. Provide a narrative report as needed to define:
  - 1. Anticipated problems, recommended actions, and their effects on the schedule.
  - 2. The effect of changes on schedules of other work.

### **1.04 Modifications to Time of Completion in the Approved Schedule**

- A. The date of beginning and the times for completion of the work are essential conditions of the Contract Documents and the work embraced shall be commenced on a date specified in the Notice to Proceed.

The Contractor will proceed with the work at such rate of progress to ensure full completion within the contract time. It is expressly understood and agreed, by and between the Contractor and the Owner that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the climatic and other factors prevailing in the locality of the work.

Every effort shall be made by the Contractor to complete the project within the "Contract Time" shown in the proposal. The "Contract Time" anticipates a "Normal" weather and climate condition in and around the vicinity of the Project site during the times of year that the construction will be carried out. Extensions of time based upon weather conditions shall be granted only if the Contractor demonstrates clearly that such conditions were "unusually severe," would not have been reasonably anticipated, and that such conditions adversely affected the Contractor's work and thus required additional time to complete the work.

- B. The following specifies the procedure for the determination of time extensions for unusually severe weather. The listing below defines the anticipated number of calendar days lost to adverse weather for each month and is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the geographic location of the project.

#### **Monthly Anticipated Calendar Days Lost to Adverse Weather Conditions**

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(7)	(4)	(4)	(4)	(6)	(3)	(4)	(2)	(3)	(3)	(2)	(5)

The above schedule of anticipated adverse weather will constitute the base line for monthly (or portion thereof) weather time evaluations. Upon acknowledgment of the Notice to Proceed and continuing throughout the contract on a monthly basis, actual adverse weather days and the impact of adverse weather days that delay the work will be recorded on a day-to-day basis. It is assumed that the work will be carried out Mondays through Fridays (holidays excepted) unless an approved construction schedule or written authorization from the Owner indicates otherwise. The number of days of delayed work due to adverse weather or the impact thereof will then be compared to the monthly adverse weather schedule above.

An actual adverse weather day must prevent work for 50 percent or more of the Contractor's workday, delay work critical to the timely completion of the project, and be documented by the Contractor. The City Representative observing the construction shall determine on a daily basis whether or not work can proceed or if work is delayed due to adverse weather or the effects thereof. The Contractor shall notify the Construction Coordinator in writing of any disagreement as to whether or not work can proceed on a given date, within 2 calendar days of that date. The Owner will use the above written notification in determining the number of working days for which work was delayed during each month.

- C. At the end of each month, if the number of working days for which work was delayed due to adverse weather exceeds that shown in the above schedule, a Change Order will be executed which increases the Contract Time. The number of workdays delayed due to adverse weather or the impact thereof will then be converted to Calendar Days based on the contract completion day and date. This conversion assumes a 5-day work week, Mondays through Fridays, holidays excepted; should the Contractor have authorization to work weekends and/or holidays, then the method of conversion of workdays to calendar days would take this into consideration. The contract time period will then be increased by the number of calendar days calculated above and a new contract completion day and date will be set.
- D. The Contractor's schedule must reflect the above-anticipated adverse weather delays on all weather-dependent activities.
- E. While extensions of time shall be granted for "unusually severe" weather or climate conditions, the Owner shall make no monetary compensation for any costs to the Contractor arising out of such delays. The Contractor shall comply with the portions of the Contract Documents relating to his project schedule and amendments thereto which result from the "unusually severe" weather condition.
- F. Breakdowns in equipment or lack of performance by the Contractor will not be considered justification for an extension of time. Liquidated damages will be assessed as delineated elsewhere.
- G. The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following, and the Contractor has promptly given written notice of such delay to the Owner or Engineer.
  - 1. To any preference, priority, or allocation order duly issued by the Owner.
  - 2. To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather as provided above; and
  - 3. To any delays of Subcontractors occasioned by any of the causes specified in paragraphs 1 and 2, above.

**1.05 City's Responsibility**

- A. City's review is only for the purpose of checking conformity with the Contract Documents and assisting Contractor in coordinating the Work with the needs of the Project.

B. It is not to be construed as relieving Contractor from any responsibility to determine the means, methods, techniques, sequences, and procedures of construction as provided in the General Conditions.

PART 2 - MATERIALS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

PART 4 - MEASUREMENT & PAYMENT (Not Applicable)

**END OF SECTION**

## DIVISION 1

### SECTION 01330 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

#### PART 1 - GENERAL

##### 1.01 Shop Drawings

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates, and similar Drawings. Include the following information:
  1. Dimensions.
  2. Identification of products and materials included by sheet and detail number.
  3. Compliance with specified standards.
  4. Notation of coordination requirements.
  5. Notation of dimensions established by field measurement.
  6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
  7. Submittal: Submit 3 blue- or black-line prints and 2 additional prints where required for maintenance manuals, plus the number of prints needed by the Contractor for distribution. The Owner's Representative will retain 2 prints and return the remainder.
    - a. One of the prints returned shall be marked up and maintained as a "Record Document."
  8. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

##### 1.02 Product Data

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
  1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
    - a. Manufacturer's printed recommendations.
    - b. Compliance with trade association standards.
    - c. Compliance with recognized testing agency standards.
    - d. Application of testing agency labels and seals.
    - e. Notation of dimensions verified by field measurement.
    - f. Notation coordination requirements.
  2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
  3. Preliminary Submittal: Submit a preliminary single copy of Product Data where selection of options is required.

4. Submittals: Submit 2 copies of each required submittal; submit 4 copies where required for maintenance manuals plus additional copies as needed by the Contractor for distribution. The Owner will retain one and will return the other marked with action taken and corrections or modifications required.
5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
  - a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
  - b. Do not permit use of unmarked copies of Product Data in connection with construction.

### **1.03 Samples**

- A. Submit full-size, full-fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
  1. Mount or display Samples in the manner to facilitate review of qualities indicated. Include the following:
    - a. Specification Section number and reference.
    - b. Generic description of the Sample.
    - c. Sample source.
    - d. Product name or name of the manufacturer.
    - e. Compliance with recognized standards.
    - f. Availability and delivery time.
  2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
    - a. Where variation in color, pattern, or other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
    - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
    - c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicated special requests regarding disposition of Sample submittals.
    - d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
  3. Preliminary Submittals: Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices. The Owner will review and return preliminary submittals with the Owner's notation, indicating selection and other action.
  4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit 3 sets. The Owner will return one set marked with the action taken.
  5. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.



- a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
  - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

#### **1.04 Quality Assurance Submittals**

- A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
  - 1. Signature: an officer of the manufacturer or other authorized individual shall sign Certification documents.
- C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 1 Section "Quality Control and Testing," and in the applicable technical specifications.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION**

## **DIVISION 1**

### **SECTION 01340 - SURVEY DATA**

#### **PART 1 - GENERAL**

##### **1.01 Survey Requirements**

- A. Contractor is responsible for the layout of the Work. The City will not provide surveying.
- B. Base all measurements, both horizontal and vertical, on established control points. Verify all established control points at site prior to laying out the work.
- C. Perform layout of the Work with qualified personnel.
  - 1. At a minimum stake corners and shelter post locations.
  - 2. At a minimum, stake concrete sidewalks, concrete pavement and changes in pavement type at grade changes, changes in horizontal alignment, and at 25-foot stations along the sidewalk centerline.
- D. All field books, notes, and other data developed by Contractor in performing surveys required by the Work will be available to City for examination throughout the construction period.

##### **1.02 Submittals**

- A. Submit to City all survey data with other documentation required for final acceptance.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT (Not Used)

**END OF SECTION**

## **DIVISION 1**

### **SECTION 01450 - QUALITY CONTROL AND TESTING**

#### **PART 1 - GENERAL**

##### **1.01 General**

- A. Provide such equipment and facilities as the City may require for conducting field tests and for collecting and forwarding samples. Do not use any materials or equipment represented by samples until tests, if required, have been made and the materials or equipment are found to be acceptable. Any product that becomes unfit for use after approval hereof shall not be incorporated into the work.
- B. All materials or equipment proposed to be used may be tested at any time during their preparation or use. Furnish the required samples without charge and give sufficient notice of the placing of orders to permit the testing. Products may be sampled either prior to shipment or after being received at the site of the work.
- C. Tests shall be made by an accredited testing laboratory selected by the Owner. Except as otherwise provided, sampling and testing of all materials and the laboratory methods and testing equipment shall be in accordance with the latest standards and tentative methods of the American Society for Testing Materials (ASTM).
- D. Where additional or specified information concerning testing methods, sample sizes, etc., is required, such information is included under the applicable sections of the Specifications. Any modification of, or elaboration on, these test procedures which may be included for specific materials under their respective sections in the Specifications shall take precedence over these procedures.

##### **1.02 Test Reports**

- A. Submit 2 copies of the reports of all tests made by testing laboratories, plus copies to be returned to the contractor.

##### **1.03 City's Responsibilities**

- A. City of Fort Collins shall be responsible for and shall pay all costs in connection with the following testing:
  - 1. Soils compaction tests.
  - 2. Pipe and structural bedding.
  - 3. Tests not called for by the Specifications of materials delivered to the site.
  - 4. Concrete, mortar and grout tests.

##### **1.04 Contractor's Responsibilities**

- A. In addition to those inspections and tests called for in the General Conditions, Contractor shall also be responsible for and shall pay all costs in connection with testing required for the following:
  - 1. All performance and field testing specifically called for by the specifications.
  - 2. All re-testing for Work or materials found defective or unsatisfactory, including tests covered under 1.03 above.
  - 3. Testing of pipe.
  - 4. Vacuum testing of manholes.
  - 5. Concrete materials and mix designs.
  - 6. Gradation tests for embedment, fill and backfill materials.
  - 7. Irrigation mainline pressure test and operational test.

8. Material Substitution - any test for basic material or fabrication of equipment offered as a substitution for a specified item on which a test may be required in order to prove it compliant with the specifications.

Nothing contained herein is intended to imply that the Contractor does not have the right to have tests performed on any material at any time for his/her own information and job control so long as the Owner does not assume responsibility for the cost or for giving them consideration when appraising quality materials.

#### **1.05 Transmittal of Test Reports**

- A. Submit 2 copies of each report of tests and engineering data furnished by the Contractor for City Representative's review. The Owner's Representative will retain one and will return the other marked with action taken and corrections or modifications required.
- B. The testing laboratory retained by the Owner will furnish three (3) copies of a written report of each test performed by laboratory personnel in the field or laboratory. Two (2) copies of each test report will be transmitted to the City Representative and one (1) copy to the Contractor within seven (7) days after each test is completed.

#### **1.06 Contractor's Quality Control System**

- A. General: The Contractor shall establish a quality control system to perform sufficient inspection and tests of all items of work, including that of his subcontractors, to ensure conformance to the functional performance of this project. This control shall be established for all construction except where the Contract Documents provide for specific compliance tests by testing laboratories or engineers employed by the City. Contractor's control system shall specifically include all testing required by the various sections of the Specifications.
- B. Contractor's quality control system is the means by which he assures himself that his construction complies with the requirements of the Contract Documents. Controls shall be adequate to cover all construction operations and should be keyed to the proposed construction schedule.
- C. Records: maintain correct records on an appropriate form for all inspections and tests performed, instructions received from the City and actions taken as a result of those instructions. These records shall include evidence that the required inspections or tests have been performed (including type and number of inspections or test, nature of defects, causes for rejection, etc.) proposed or directed remedial action, and corrective action taken. Document inspections and tests as required by each section of the Specifications. Provide copies to City in a reasonable time.
- D. Pipe alignment and grade is to be maintained through the use of suitable surveying instruments or laser equipment operated continuously during construction. Horizontal tolerances of  $\pm 0.3$  feet and vertical tolerances of  $\pm 0.1$  feet maximum deviation from plan and construction staking are to be maintained, except that visible "snaking" of the horizontal alignment and changes in directions of slope will not be permitted.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT (Not Used)

**END OF SECTION**

## **DIVISION 1**

### **SECTION 01500 - TEMPORARY CONTROLS**

#### **1.01 Noise Control**

- A. Take reasonable measures to avoid unnecessary noise when construction activities are being performed in populated areas.
- B. Construction machinery and vehicles shall be equipped with practical sound muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the work.
- C. Cease operation of all machinery and vehicles between the hours of 6:00 p.m. and 7:00 a.m.

#### **1.02 Dust Control**

- A. Dusty materials in piles or in transit shall be covered to prevent blowing.
- B. Earth and road surfaces subject to dusting due to construction activities and detouring of traffic shall be kept moist with water or by application of a chemical dust suppressant.
  - 1. Chemical dust suppressant shall not be injurious to existing or future vegetation.

#### **1.03 Pollution Control**

- A. Prevent the pollution of drains and watercourses by sanitary wastes, concrete, sediment, debris and other substances resulting from construction activities.
  - 1. Retain all spent oils, hydraulic fluids and other petroleum fluids in containers for disposal off the site.
  - 2. Prevent sediment, debris or other substances from entering sanitary sewers, storm drains and culverts.

#### **1.04 Erosion Control**

- A. Take such measures as are necessary to prevent erosion of soil that might result from construction activities.
  - 1. Measures in general will include:
    - a. Control of runoff.
    - b. Trapping of sediment.
    - c. Minimizing area and duration of soil exposure.
    - d. Temporary materials such as hay bales, sandbags, plastic sheets, riprap or culverts to prevent the erosion of banks and beds of watercourses or drainage swales where runoff will be increased due to construction activities.
- B. Preserve natural vegetation to the greatest extent possible.
- C. Locate temporary storage and route construction traffic so as to preserve vegetation and minimize erosion.
- D. Comply with the City of Fort Collins' Storm Drainage Erosion Control Manual.

**END OF SECTION**

## **DIVISION 1**

### **SECTION 01510 - TEMPORARY UTILITIES**

#### **PART 1 - GENERAL**

##### **1.01 Utilities**

- A. Furnish all utilities necessary for construction including, but not limited to temporary electric power and pay all cost associated with utilities during and used for the contract period. All temporary utilities installation shall meet the construction safety requirements of OSHA, State and local governing agencies.

##### **1.02 Water**

- A. Contractor is responsible for obtaining water for construction and shall pay all costs associated with establishing a temporary meter used during construction.

##### **1.03 Sanitary Facilities**

- A. Furnish temporary sanitary facilities at the site in the vicinity of the construction for the needs of construction workers and others performing work or furnishing services on the Project.
- B. Properly maintain sanitary facilities of reasonable capacity throughout construction periods.
- C. Enforce the use of such sanitary facilities by all personnel at the site.
- D. Obscure sanitary facilities from public view to the greatest extent practical.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT (Not Used)

**END OF SECTION**

## **DIVISION 1**

### **SECTION 01570 - TRAFFIC CONTROL**

#### **PART 1 - GENERAL**

##### **1.01 General**

- A. Traffic Control necessary to complete the project as depicted in the plans and specifications will be provided by the Contractor and will not be paid for separately.
- B. The Contractor must submit traffic control plans and coordinate all traffic control with the City's Traffic Control Coordinator. The traffic control plans must be submitted and approved 72 hours prior to starting construction and before making each modification.
- C. Conformance: City of Fort Collins Work Area Traffic Control Handbook, Manual of Uniform Traffic Control Devices (U.S. Dept. of Transportation), or applicable statutory requirements of authority having jurisdiction.
- D. Limited closures may be permitted for short periods up to three days to allow installation of concrete pavement. Closures must be requested and approved 72 hours prior to anticipated closure.
- E. Limited alternating one-way traffic operation may be permitted during the hours from 9:00 A.M. to 3:30 P.M. One-way traffic operation must be requested and approved 72 hours prior to anticipated operation.
- F. At all times, Contractor must maintain two-way traffic with a minimum of one lane of traffic in each direction. Limited closures may be allowed.
- G. The Contractor must coordinate with adjacent residents to provide and maintain them sufficient access during the duration of the project. It will be the Contractor's responsibility to coordinate and communicate with the residents during construction.
- H. Keep traffic areas free of excavated material, construction equipment, pipe, and other materials and equipment.
- I. Keep fire hydrants and utility control devices free from obstruction and available for use at all times.
- J. Conduct operations in a manner to avoid unnecessary interference with public and private roads and drives.
- K. Provide and maintain temporary approaches or crossings at streets, businesses, and residences.
- L. Keep roads open and in acceptable condition, unless closure or detour has been approved by City's Traffic Control Coordinator 72 hours prior to closure or detour.
- M. Define a temporary pedestrian access route for children coming from the surrounding neighborhoods. This pedestrian access route shall be located outside of the project limits. The pedestrian access route shall be kept free of excavated material, construction equipment, pipe, and other materials.

##### **1.02 Traffic Control Plan**

- A. Submit a detailed traffic control plan to Traffic Control Coordinator for review and acceptance. Plan must be accepted 72 hours prior to work commencing at the site. Maintain the accepted plan throughout all phases of construction. Provide copy to Owner prior to submittal.
  - 1. Notify police, sheriff, ambulance services, and fire authorities of traffic control plan and the schedule of it. Distribute copies if requested.

##### **1.03 Flagmen**

- A. Required where necessary to provide for public safety, or the regulation of traffic, or by jurisdictional authorities.

- B. Shall be properly equipped and licensed.

#### **1.04 Warning Signs and Lights**

- A. Provide suitable barricades and warning signs for:
  - 1. Open trenches and other excavations.
  - 2. Obstructions, such as material piles, equipment, piled embankment.
- B. Illuminate by means of warning lights all barricades and obstructions from sunset to sunrise.
- C. Protect roads and driveways by effective barricades on which are placed acceptable warning signs.

#### **1.05 Parking**

- A. Provide suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project so as to avoid interference with private property, public traffic, City's operations, or construction activities. Such parking shall occur on the project site or another suitable location, approved by the City.

#### **1.06 Roadway Usage between Operations**

- A. At all times when Work is not actually in progress, Contractor shall make passable and shall open to traffic such portions of the Project and temporary roadways or portions thereof as may be agreed upon between Contractor and City and all authorities having jurisdiction over any properties involved.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT (Not Used)

**END OF SECTION**



## **DIVISION 1**

### **SECTION 01600 – MATERIALS AND EQUIPMENT**

#### **PART 1 - GENERAL**

##### **1.01 Related Documents**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

##### **1.02 Summary**

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

##### **1.03 Definitions**

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
  - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "systems," and terms of similar intent.
  - 2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form a part of the Work.
  - 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

##### **1.04 Submittals**

- A. Product List: Prepare a list showing products specified in tabular form acceptable to the Owner. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.
  - 1. Coordinate product list with the Contractor's Construction Schedule and the Schedule of Submittals.
  - 2. Form: Prepare product list with information on each item tabulated under the following column headings:
    - a. Related Specifications Section number.
    - b. Generic name used in Contract Documents.
    - c. Proprietary name, model number, and similar designations.
    - d. Manufacturer's name and address.
    - e. Supplier's name and address.
    - f. Installer's name and address.
    - g. Projected delivery date or time span of delivery period.
  - 3. Initial Submittal: Within 30 days of date commencement of the Work, submit 3 copies of an initial product list. Provide a written explanation of omissions of data and for known variations from Contract requirements.
  - 4. Complete List: Within 60 days after date of commencement of the Work, submit 3 copies of the completed product list. Provide a written explanation for omissions of data and for known variations from Contract requirements.

5. Owner's Action: The Owner will respond in writing to Contractor within 2 weeks of receipt of the completed product list. No response within this period constitutes no objection to listed manufacturers or products, but does not constitute a waiver of the requirement that products comply with Contract Documents. The Owner's response will include a list of unacceptable product selections, containing a brief explanation of reasons for this action.

### **1.05 Quality Assurance**

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
- B. Compatibility of Options: When the Contractor is given the option of seeking between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. Foreign Product Limitations: Except under one or more of the following conditions provide domestic products, not foreign products, for inclusion in the Work:
  1. Not available domestic product complies with the Contract Documents.
  2. Domestic products that comply with the Contract Documents are available only at prices or terms substantially higher than foreign products that comply with the Contract Documents.

### **1.06 Product Delivery, Storage and Handling**

- A. Delivery, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
  1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  3. Delivery products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
  5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
  6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
  7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation.

## **PART 2 - PRODUCTS**

### **2.01 Product Selection**

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
- B. Product Selection procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
  1. Proprietary Specification Requirements: Where Specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
  2. Semiproprietary Specification Requirements: Where Specifications name 2 or more products or manufacturers or where Specifications specify products or manufacturers by name, accompanied

by the term “or equal” or “or approved equal,” provide one of the products listed or comply with the Contract Document provisions concerning “substitutions” or obtain approval for use of an unnamed product.

3. Nonproprietary Specification Requirements: When Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning “substitutions” to obtain approval for use of an unnamed product.
4. Descriptive Specification Requirements: Where Specifications describe a product or name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
5. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
6. Visual Matching: Where Specifications require matching an established Sample, the Owner’s decision will be final on whether a proposed product matches satisfactorily.
7. Visual Selection: Where specified product requirements include the phrase “... as selected from manufacturer’s standard colors, patterns, textures...” or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Owner will select the color, pattern, and texture from the product line selected.

## **PART 3 - EXECUTION**

### **3.01 Installation of Products**

- A. Comply with manufacturer’s instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

## **END OF SECTION**

## DIVISION 1

### SECTION 01700 – CONTRACT CLOSEOUT

#### PART 1 – GENERAL

##### 1.01 Related Documents

- A. Drawings and general provisions of the Contract, including general and supplementary conditions and other Division 1 specification sections, apply to this section.

##### 1.02 Summary

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
  1. Inspection procedures.
  2. Project record document submittal.
  3. Operation and maintenance manual submittal.
  4. Submittal of warranties.
  5. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

##### 1.03 Substantial Completion

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
  1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
  2. Advise the Owner of pending insurance changeover requirements.
  3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
  4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.
  6. Deliver tools, spare parts, extra stock, and similar items.
  7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
  8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
  9. Complete final cleanup requirements, including touchup painting.
  10. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the Owner will either proceed with inspection or advise the Contractor of unfilled requirements. The Owner will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be

completed or corrected before the certificate will be issued.

1. If the Owner's Representative determines that the work is not substantially complete at the time of review or that deficiencies remain at time of compliance review, the Contractor shall pay for the additional review(s) by Owner's Representative.
2. Results of the completed inspection will form the basis of requirements for final acceptance.

#### **1.04 Status after Substantial Completion**

- A. The date of substantial completion marks the beginning of the maintenance period defined in Section 02970 – Planting Maintenance.
- B. During maintenance period, the following conditions hold:
  1. Insurance: Same as during construction.
  2. Electricity and Irrigation Water: Supplied by Owner, as installed by Contractor under this contract.
  3. Bonds: Remain in effect.
  4. Retainage: Same as during construction.

#### **1.05 Final Acceptance**

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
  1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
  2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
  3. Submit a certified copy of the Owner's final inspection list of items to be completed or corrected, endorsed and dated by the Owner. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Owner.
  4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
  5. Submit consent of surety to final payment.
  6. Submit a final liquidated damages settlement statement.
  7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Reinspection Procedure: The Owner will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Owner.
  1. Upon completion of reinspection, the Owner will prepare a certificate of final acceptance. If the Work is incomplete, the Owner will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
  2. If necessary, reinspection will be repeated.

#### **1.06 Record Document Submittals**

- A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for the Owner's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies

substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
2. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
3. Note related change-order numbers where applicable.
4. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
5. Prior to Contract Closeout, obtain from the Owner a reproducible mylar copy of the Drawings. Using technical drafting pen, duplicate information contained on the Record Drawings maintained on site.

Label each sheet "Record Drawing." On the first sheet, the Contractor or resident

Superintendent shall execute the following statement:

Having reviewed this document and all attachments, I affirm that, to the best of my knowledge, the information presented here is true and accurate.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Position: \_\_\_\_\_

- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda. Include with the Project Manual one copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.
  1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
  2. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
  3. Note related record drawing information and Product Data.
  4. Upon completion of the Work, submit record Specifications to the Owner.
- D. Record Product Data: Maintain one copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.
  1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
  2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.
  3. Upon completion of markup, submit complete set of record Product Data to the Owner.
- E. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Owner.

- F. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch (51-mm), 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
1. Emergency instructions.
  2. Spare parts list.
  3. Copies of warranties.
  4. Wiring diagrams.
  5. Recommended “turn-around” cycles.
  6. Inspection procedures.
  7. Shop Drawings and Product Data.
  8. Fixture lamping schedule.

#### **1.07 Warranties and Bonds**

- A. Provide duplicate notarized copies. Maintain copies of all Contractor’s submittals and assemble documents executed by subcontractors, suppliers, and manufacturers. Provide table of contents and assemble in binder with durable plastic cover.
- B. Submit material prior to final application for payment. For items of Work delayed materially beyond date of substantial completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

#### **1.08 Final Payment**

- A. At the end of maintenance period, submit written certification that Contract Documents Work has been reviewed and that Work is complete in accordance with Contract Documents and ready for Owner Representative’s review.
- B. In addition to submittals required by the conditions of the Contract provide submittals required by governing authorities, and submit a final statement of accounting giving total adjusted Contract Sum, previous payments and sum remaining due.
- C. Owner’s Representative will issue a final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order.
- D. Retainage will be held until advertisement for liens and encumbrances is completed.

### **PART 2 – PRODUCTS (Not Applicable)**

### **PART 3 – EXECUTION**

#### **3.01 Closeout Procedures**

- A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner’s personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer’s representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
  1. Maintenance manuals.
  2. Record documents.
  3. Spare parts and materials.
  4. Tools.
  5. Lubricants.
  6. Fuels.
  7. Identification systems.
  8. Control sequences.
  9. Hazards.
  10. Cleaning.

11. Warranties and bonds.
  12. Maintenance agreements and similar continuing commitments.
- B. As part of instruction for operating equipment, demonstrate the following procedures:
1. Startup.
  2. Shutdown.
  3. Emergency operations.
  4. Noise and vibration adjustments.
  5. Safety procedures.
  6. Economy and efficiency adjustments.
  7. Effective energy utilization.

### **3.02 Final Cleaning**

- A. General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 1.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
1. Remove labels that are not permanent labels.
  2. Clean transparent materials, including mirrors and glass in doors and windows.
  3. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean.
  4. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
  5. Clean the site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

**END OF SECTION**