

**Washington County Convention  
and Tourism Office**

**RFP for the  
Dixie Convention Center Chiller Upgrade**

**DESIGN-BUILD PROJECT SCOPE**



## **1.0 PROJECT INTRODUCTION**

Project Title: Dixie Convention Center Chiller Upgrade

Project Location: 1835 S Convention Center Dr, St. George, UT 84790

### **1.1 Scope**

In accordance with the terms and conditions of the Contract, the Design-Build Contractor (DBC) shall perform the work of this Request for Proposal (RFP) for the Dixie Convention Center as described herein.

All Architect-Engineer (A-E) Services required in this RFP shall be performed by licensed Architects and Engineers registered in the State of Utah.

The work of this RFP shall be performed in accordance with all state and local code requirements and as specified herein.

Proposals are to be open and include a detailed cost estimate with labor, materials, overhead, profit, etc., for each phase with cost breakdowns including but not limited to mobilization, demolition of walls, ceilings, electrical, mechanical, framing, sheetrock and mudding, painting, doors and frames, door hardware, Sheetmetal, piping, controls, electrical, lighting, ceiling, etc. Dixie Convention Center reserves the right to remove items from any phase or scoop upon notification to the selected contractor with 14 days' warning before the scheduled start or order day of items affected. Removed items may be completed by Dixie Convention Center personnel and/or company already under contract with the Dixie Convention Center and will not interfere with the progress of awarded contractor.

**The RFP will be due by November 15, 2022**

### **1.2 Location**

This project is located on the upper level of the Dixie Convention Center.

### **1.3 Background**

The Dixie Convention Center needs to replace the aging chiller that is located on the upper level of the convention center. The original design of the building has changed, and with this, the chiller needs to be replaced and designed to give the city the most modern and efficient cooling system.

## **1.4 Brief Description**

Currently, the convention center has one 500-ton Trane centrifugal chiller, two chiller pumps, and a new cooling tower. The Dixie Convention Center is looking to replace the chiller and optimize the chiller system.

This project entails selective demolition work of miscellaneous building components such as potential walls, possibly ceilings, housekeeping pads, piping, insulation, controls, and electrical. The Dixie Convention Center would like to go with a design-build approach. The Dixie Convention Center will only accept one total turn-key price from all bidding contractors. In your bid, you will include demolition, design, installation, start-up, and commissioning. The design-build team will be responsible for all trades needed to complete the project.

## **The RFP will be due by November 15, 2022**

## **1.5 Schedule**

The work in this RFP shall be completed in accordance with the following schedule:

### DB Design Development Documents:

DB Design Development Documents submitted no later than 20 calendar days after award. Per phase

Owner Review completed no later than 15 calendar days after submission of DB Design Development Documents. Per phase

### 100% Draft DB Construction Documents:

Work on 100% Draft DB Construction Documents shall continue during the DB Design Development Documents review, and once DB Design Development review comments are received, they shall be addressed and incorporated in the 100% Draft DB Construction Documents. Per phase

100% Draft DB Construction Documents and written responses to the Owner DB Design Development Document Review Comments submitted no later than 30 calendar days after submission of DB Design Development Documents. Per phase

Owner Review completed no later than 15 calendar days after receipt of 100% Draft DB Construction Documents. Per phase

100% Complete DB Construction Documents:

100% Complete DB Construction Documents and written responses to the 100% Draft DB Construction Documents Review Comments submitted no later than 30 calendar days after submission of 100% Draft DB Construction Documents. Per phase

Owner Review completed no later than 15 calendar days after receipt of 100% Complete DB Construction Documents. Per phase

Complete Stamped and Signed DB Construction Documents:

Complete Stamped and Signed DB Construction Documents and written responses to the 100% Complete DB Construction Document review comments submitted no later than 15 calendar days after receipt of 100% Complete DB Construction Document review comments. Per phase

Construction:

Construction should be completed no later than 210 calendar days after the award of the contract.

As-Constructed Drawings:

As-Constructed Drawings completed no later than 21 calendar days after Substantial Completion. Per phase

All DB Design Development, DB Construction Documents and As-Constructed Drawings shall be submitted to the Owner's Project Manager.

**1.6 Information**

Owner Points of Contact:

**Contractual:**

Operations Manager: Milo Hughes, (435)986-6640, and miloh@dixiecenter.com

Facilities Services Director: Carlos Robles, (435)627-4126, and carlos.robles@sgcity.org

**Technical:**

Operations Manager: Milo Hughes, (435)986-6640, and miloh@dixiecenter.com

Facilities Services Director: Carlos Robles, (435)627-4126, and carlos.robles@sgcity.org

## **1.7 Data and Materials to be provided by the Owner**

The following data and materials will be provided to the DBC and are included in Section 5 of this RFP:

- Basis of Design Report
- Existing Drawings
- Existing Equipment Layout Plans
- Historic Drawings
- Historic Photographs
- Proposed office layout

## **2.0 PROJECT REQUIREMENTS**

### **2.1 General Requirements**

#### **2.1.1 Scope of Work and Project Summary/Requirements**

The design-build team will be responsible for presenting a complete detailed scope of work to Dixie Convention Center. The scope of work must be presented at the time of the bid.

#### **2.1.2 Progress Payments**

**Design Phase** - Progress payments during the design phase of the work will be based on the submission, review, and acceptance of design deliverables.

Cost breakdown of various sub cost

Pre-bid meeting

**Construction Phase** - Progress payments during construction will be based on the percentage of work completed on items listed on the approved schedule of values. Actual construction completed and in place will form the basis for payment. Verification of the % complete shall be initiated by the DBC under the direction of a representative of the Contracting Officer unless the Contracting Officer waives this requirement in a specific instance. The DBC shall make the computations for payment based on the Owner's verification of work completed and in place for any periods for which progress payments are requested.

The DBC shall furnish the originals of all field notes and all other records relating to the basis for payment to the Contracting Officer, who shall use them as necessary to determine

the final amount of progress payments. The DBC shall retain copies of all such material furnished to the Contracting Officer.

### **2.1.3 Project Meetings**

#### **Design Meeting**

After the award of the contract and acceptance of the Performance and Payment bonds, the CO will arrange a design meeting with the DBC. The meeting agenda shall include the following as a minimum:

- Review and emphasize the Owner's needs and design objectives.
- Schedule of Values
- Design schedule
- Modifications during the design
- Submittals during the design
- Areas available for use by the DBC
- Access requirements of the Owner
- Payments to the DBC

#### **Preconstruction Meeting**

The following items shall be submitted by DBC to Owner a minimum of one week prior to the Preconstruction Meeting:

- Letter designating the DBC Project Superintendent.
- Project Schedule with construction portion fully developed.
- Accident Prevention Program
- A list of DBC subcontractors (must be approved by the Dixie Convention Center prior to work starting)
- Written statements from DBC subcontractors certifying compliance with applicable labor standard clauses, evidence of liability insurance coverage and workmen's compensation.
- Waste Management Plan
- Quality Control Plan

After 100% Complete DB Construction Documents are approved, and prior to the start of construction, the CO will arrange an on-site Preconstruction meeting with the DBC. The meeting agenda will include the following as a minimum:

- Correspondence procedures
- Jobsite safety
- Roles and responsibilities
- Lines of Authority

- Progress Payments
- Submittal process
- Construction schedule (Provide a minimum of two-color hard copies and electronic copy in the software it was created in.)
- Labor standards
- Payroll reports
- Modifications
- Accident reporting

## **Progress Meetings**

The DBC shall participate in by-weekly on-site meetings with the Contracting Officer and other project team members to update them on the following meeting agenda items:

- Approval of minutes of previous meetings
- Submittal status
- Requests for Information (RFI's) and issues
- Modifications
- Work in progress and projected
- Schedule update (provide updated CPM schedule)
- Status of Project Record Drawings and O&M Manuals
- Other business relating to work

### **2.1.4 Project Schedule**

**General:** The DBC schedule shall include detailed design phase activities with design deliverable submission dates and review periods, as well as a summary construction schedule with important milestones included for all phases.

Fully develop the construction portion of the schedule and submit it to the Contracting Officer before the Preconstruction meeting or any construction begins. The project schedule shall be updated monthly throughout the entire contract period and until the project's substantial completion. The status date of each schedule update shall be ten days before the progress payment request date.

Construction work cannot begin until the Owner is obtained for the entire set of 100% Complete DB Construction documents of phase to be done.

**Purpose:** The purpose of the project schedule is to ensure adequate planning, coordination, scheduling, and reporting during the execution of the design and construction activities of the DBC. The project schedule will assist the DBC and the Contracting Officer in monitoring the progress of the work, evaluating proposed changes, and processing the DBC's monthly progress payment requests.

**Schedule Development:** The project schedule shall cover the entire contract period. The late finish date of the project schedule shall be the same as the established completion date of the contract.

The DBC shall use the Critical Path Method (CPM) with limited use of lead or lag durations between scheduled activities. The DBC's project schedule shall consist of procurement activities (including mobilization, submittal, and the fabrication and delivery of key and long-lead procurement items) and construction activities.

The DBC's project schedule shall consist of, but not be limited to, the following for each activity:

- Identify each activity number with numerical designations (maximum 5-digit). The numbering of activities shall be in increments of 10.
- Concise description of the work represented by the activity (maximum 48 characters). Avoid the use of non-standard abbreviations. The work related to each activity shall be limited to one work trade.
- Activity duration in whole working days with a maximum duration of 15 workdays each, unless otherwise approved by the Contracting Officer, except for non-construction activities, including mobilization, shop drawing and sample submittals, fabrication of materials, delivery of materials and equipment, and concrete curing.

In developing the project schedule, the DBC shall be responsible for ensuring that subcontractor work at all tiers, as well as its own work, is included in the project schedule.

The project schedule as developed shall show the sequence and interdependence of activities required for the complete performance of the work. The DBC shall be responsible for ensuring all work sequences are logical and that the project schedule shows a coordinated work plan. Proposed durations assigned to each activity shall be the DBC's best estimate of the time required to complete the activity, considering the scope and resources planned for the activity. Resource loading of each activity shall list all personnel by labor category and equipment type and capacity proposed to complete the activity in the duration shown. Include permit requirements and constraints. Seasonal weather conditions shall be considered and included in the planning and scheduling of all work influenced by high or low ambient temperatures, wind and/or precipitation to ensure the completion of all work within the contract time.

### **Project Schedule Updates**

**Monthly updates:** The monthly updating of the project schedule shall be an integral part and essential element of the estimate upon which progress payments shall be made under this contract. If in the judgment of the Contracting Officer, the DBC fails or refuses to provide a schedule of values and a complete schedule update or revision as specified hereinafter, the DBC shall be deemed to have not provided the required information upon which the progress payment may be made and shall be subject to retainage of a portion of the payment.



**Narrative:** The report shall include a brief description of the actual progress made during the update period, actual and potential delaying activities; any impediments to progress; issues related to inclement weather; progress toward established milestones and project float. The report shall include a brief description of the work anticipated to be performed in the next month. Any minor revisions to the schedule should be identified so they can be evaluated and accepted or rejected.

As the Work progresses, indicate the Actual Completion percentage for each activity. If the schedule update shows a late finish date after the contract completion date, at a minimum, include the following in the narrative with your submission:

- Any known delays.
- Actions that will be taken to get back on schedule.
- Pending modifications.
- Impediments or constraints affecting progress.

**Progress Payments:** The monthly updating of the currently accepted Construction Schedule shall be an integral part of the process upon which progress payments will be made under this contract. If the Contractor fails to provide schedule updates or revisions, then a portion of the monthly payment may be retained until such corrections have been made.

**Time Impact Analysis for Contract Modifications, Changes, Delays, and Contractor Request Requirements:** When contract modifications or changes are initiated, delays are experienced, or the DBC desires to revise the project schedule, the DBC shall submit to the Contracting Officer a written time impact analysis illustrating the influence of each modification, change, delay, or DBC request on the contract time.

**Time Extensions:** Activity delays shall not automatically mean that an extension of the contract time is warranted or due to the DBC. It is possible that a modification, change, or delay will not affect existing critical activities or cause non-critical activities to become critical. A modification, change, or delay may result in only absorbing a part of the available, total float that may exist within an activity chain of the project schedule, thereby not causing any effect on the contract time. Time extensions will be granted in accordance with the terms of the contract.

**Float:** Float is not for the exclusive use or benefit of either the Owner or the DBC. Extension of the contract time will be granted only to the extent the equitable time adjustments to the activity or activities affected by the modification, change, or delay exceeds the total (positive or zero) float available on a particular activity.

## 2.2 Design Requirements

## 2.2.1 DB Design Development and Construction Documents

This element of work shall consist of the preparation of the DB Design Development Documents and DB Construction Documents. All documents shall be prepared using the English System of Weights and Measurements and shall be prepared in accordance with the state and local codes.

### Deliverables

The following deliverables are required:

#### DB Design Development

##### DB Design Development Documents:

- Documents for Owner Review:
  - ✦ Submit three hard copies of the following DB Design Development Documents for review:
    - DB-Design Development Drawings
    - Divisions 2 through 49 Outline Specifications
    - Product File
    - Statement of Structural Tests and Special Inspections
  - ✦ Submit in native formats (no PDF formatted files) one electronic copy of the Draft DB Design Development Drawings.

#### DB Construction Documents

##### 100% Draft DB Construction Documents

- Documents for Owner Review:
  - ✦ Submit three hard copies of the following 100% Draft DB Construction Documents for review:
    - DB Construction Drawings
    - Divisions 2 through 49 Construction Specifications (Construction Institute (CSI) Master Format 04 Edition)
    - Product File
    - Statement of Structural Tests and Special Inspections
    - Design Calculations

- Written responses to the Owner's DB Design Development Documents Review Comments
- ✦ Submit in native formats (no PDF formatted files) one electronic copy of the 100% Draft DB Construction Drawings and written responses/resolutions to all Owner DB Design Development Documents Review Comments.

#### 100% Complete DB Construction Documents

- Documents for Owner Review:
  - ✦ Submit three hard copies of the following 100% Complete DB Construction Documents for review and final approval:
    - DB Construction Drawings
    - Divisions 2 through 49 Construction Specifications
    - Product File
    - Statement of Structural Tests and Special Inspections
    - Design Calculations
    - Written responses to the 100% Draft DB Construction Documents Owner review comments
  - ✦ Submit in native formats (no PDF formatted files) one electronic copy of the 100% Complete DB Construction Drawings and written responses/resolutions to all 100% Draft DB Construction Documents Owner Review Comments.

#### Complete Stamped and Signed DB Construction Documents

- Upon final approval of the 100% Complete DB Construction Documents, submit the Complete Stamped and Signed DB Construction Documents for construction, including the following:
  - Construction Drawings in AutoCAD electronic format, with one (1) full-size ANSI D size paper set.
  - Divisions 2 through 49 Specifications in PDF and MS Word format.
  - Product File in PDF format.
  - Statement of Structural Tests and Special Inspections in PDF format.
  - Design Calculations in PDF format.
  - Written responses to the 100% Complete DB Construction Documents Owner review comments in PDF format.

## **2.3 Construction Requirements**

### **2.3.1 Schedule of Values**

After the contract award and before the Design Meeting, submit a schedule of dollar values based on the Contract Price Schedule. Break down each lump-sum item into component parts of design deliverables or construction work for which progress payments may be requested. The total costs for the component parts of work shall equal the contract line-item amount for that lump-sum item. The Contracting Officer may request data to verify the accuracy of dollar values. Include mobilization, general condition costs, overhead and profit in the total dollar value of unit price items and in the component parts of work for each lump-sum item, as described below. Do not include mobilization, general condition costs, overhead or profit as a separate item.

Do not break down unit price items. Use only the contract line-item amount for unit price items.

The total cost of all items shall equal the contract sum. The Schedule of Values will form the basis for progress payments.

An acceptable Schedule of Values shall be agreed upon by the DBC and Contracting Officer before the first progress payment is processed. A cost-loaded project schedule is an acceptable substitute for a schedule of values.

### **2.3.2 Construction Support**

#### **Staging Areas**

Construction sites will be limited to the smallest feasible area. Ground disturbance and site management will be carefully controlled to prevent undue damage to vegetation and soils and to minimize air, water, soil, and noise pollution.

Staging is limited in or near the construction area for a construction office or trailer. Construction equipment and material storage shall be in previously disturbed areas near the construction site. All staging areas shall be returned to pre-construction conditions once construction is complete. Standards for this, and methods for determining when the standards are met, shall be developed in consultation with the CO.

Structures:

Trailers, Storage, Field Offices, Staging Area, and Sheds: Location to be approved by the Contracting Officer.

DBC Field Office: The field office shall be structurally sound construction and weather tight. The location will be determined by Owner prior to issuing a Start Work Notice.

Storage Sheds: If used, provide weather-tight sheds or other covered facilities for storage of materials subject to weather damage.

If used, all temporary water, sewer, sanitary facilities and electric utilities shall be completely removed upon project completion. Remove temporary utility connections.

The location of the Staging Area for construction equipment will require CO approval.

### **Construction Zones**

Construction zones shall be fenced with CO-approved construction barrier fencing, plastic or portable fencing, before any construction activity. The fencing shall define the construction zone and confine activity to the minimum area required for construction. All protection measures shall be clearly stated in the construction specifications, and workers will be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing. Protection of the Public: Fence, barricade, or otherwise block off the immediate work area to prevent unauthorized entry.

### **Special Construction Requirements**

#### **Parking of Construction Vehicles**

Parking of vehicles shall be limited to existing roads, in legally designated areas, and within approved staging area(s).

### **2.3.3 Submittals During Construction**

#### **Construction Submittals:**

**Informational Submittals:** Written information that does not require the Owner's responsive action. Submittals may be rejected for not complying with requirements.

- General: Prepare and submit Informational Submittals required by individual Specification Sections.
- Informational submittals include but are not limited to Product Data, Certificates, Test reports, Manufacturer's instructions, Division 01 Management Plans, etc.

#### **Contractors Review**

Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions.

#### **General Submittal Procedures**

Prepare and submit submittals shown in Part 4.0, Technical Requirements. Details on the specific requirements for each can be found in the individual technical sections.

Contracting Officer reserves the right to require submittals in addition to those called for in individual sections.

**Coordination:** Coordinate preparation and processing of submittals with the performance of construction activities. Review for legibility, accuracy, completeness, and compliance with Contract Documents.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Partial submittals are not acceptable, will be considered non-responsive, and will be returned without review.

**Processing Time:** Allow enough time for submittal review, including time for re-submittals. Time for review shall commence when an e-mail notification is received by the Contracting Officer (or designee) indicating the submittal has been received and is ready for review. When the Contracting Officer has completed their review, an e-mail notification will be sent to the Contractor indicating the submittal has been processed. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.

1. Informational submittals: Allow 10 days for review of each submittal.

### **Contracting Officer's Review**

**Informational Submittals:** Contracting Officer will review each submittal and will either accept or reject them.

### **Submittal List**

A submittal list has been attached to the end of this section. The intent is to provide an overall summary of submittal requirements and not a comprehensive list. The technical requirements indicate the type and specify submittal requirements. The terms and conditions of the Contract still apply regardless of what is shown on the submittal list.

### **Use for Construction**

Use only final submittals with marks indicating “Approved” or “Approved with notations.” Ensure all notations have been incorporated and, at a minimum, keep one copy of the final approved submittal on-site for use during construction

### **2.3.4 Construction Coordination**

**Notification:** The Contracting Officer (CO) will provide all necessary written notification and/or directions to the contractor.

### **2.3.5 Digital Images**

Provide five existing condition images and five images per week documenting construction. Maintain an index with each set of construction images that identify the number, date, time, and

description for each. Maintain one set of images on CD-R/DVD-R in the field office at the Project site, available at all times for reference.

Take appropriate digital images documenting construction progress and problems, such as capturing items that will not be seen later, etc. Send digital images to recipients on a weekly basis, as directed by the Contracting Officer, of each work activity via e-mail in an approved format.

### **2.3.6 Quality Control**

#### **General**

The quality of all work shall be the responsibility of the Contractor. Testing shall be the responsibility of an independent testing laboratory. Inspect and test all work as needed to ensure that the quality of materials, workmanship, construction, finish, and functional performance is in compliance with applicable specifications and drawings.

Quality Control Daily Reports shall be completed by the Quality Control Supervisor.

Test reports shall be completed by the person performing the test.

The Contracting Officer may designate locations of tests.

The Contractor's designated Quality Control Supervisor shall be on the project site whenever contract work is in progress.

The Contractor's job supervisory staff may be used to assist the Quality Control Supervisor supplemented, as necessary, by additional certified testing technicians.

#### **Submittals**

**Quality Control Plan:** Prior to the Preconstruction meeting, submit for approval a written Contractor Quality Control (CQC) plan.

If the plan requires any revisions or corrections, the Contractor shall resubmit the plan within 10 days.

The Owner reserves the right to require changes in the plan during the contract period as necessary to obtain the quality specified.

No change in the approved plan may be made without written concurrence by the Contracting Officer.

The plan shall include:

- A list of personnel responsible for quality control and assigned duties. Include each person's qualifications.
- A copy of a letter of direction to the Contractor's Quality Control Supervisor outlining assigned duties.
- Names, qualifications, and descriptions of laboratories to perform sampling and testing and samples of proposed report forms.
- Methods of performing, documenting, and enforcing quality control of all work.
- Methods of monitoring and controlling environmental pollution and contamination as required by regulations and laws.

**Daily Reports:** Submit showing all inspections and tests on the first workday following the date covered by the report. Utilize the forms attached at the end of this section.

**Test Reports:** Submit Daily Test Information Sheets with Quality Control Daily Reports.

Submit failing test results and proposed remedial actions within four hours of noted deficiency.

Submit three copies of complete test results not later than one calendar day after the test was performed.

If the CQC plan and Quality Control Daily Reports are not submitted as specified, the Contracting Officer may retain all payments until such time a plan is accepted and implemented or may retain payments for work completed on days there are no Quality Control daily reports.

**Accessibility Inspection Report:** Submit the report (see attached Accessibility inspection report) no later than three calendar days after the inspection was performed.

**Off-Site Inspection Reports:** Submit prior to shipment.

## **Execution**

**Off-Site-Control:** Items that are fabricated or assembled off-site shall be inspected for quality control at the place of fabrication.

**On-Site Control:** Notify the Contracting Officer at least 48 hours in advance of the preparatory phase meeting.

Notify the Contracting Officer at least 24 hours in advance of the initial and follow-up phases.

## **Quality Control Phases**

**Preparatory Phase:** Perform before beginning each feature of work.



Review control submittal requirements with personnel directly responsible for the quality control work. As a minimum, the Contractor's Quality Control Supervisor and the foreman responsible for the feature of work shall be in attendance.

Review all applicable specifications sections and drawings related to the feature of the work.

Ensure that copies of all referenced standards related to sampling, testing, and execution for the feature of work are available on site.

Ensure that provisions have been made for field control testing.

Examine the work area to ensure that all preliminary work has been completed.

Verify all field dimensions and advise the Contracting Officer of discrepancies with contract documents.

Ensure that necessary equipment and materials are at the project site and that they comply with approved shop drawings and submittals.

Document all preparatory phase activities and discussions on the Contractor's Quality Control Daily Report.

**Initial Phase:** As soon as work begins, inspect and test a representative portion of a particular feature of work for quality of workmanship.

Review control testing procedures to ensure compliance with contract requirements. Document all initial phase activities and discussions on the Contractor's Quality Control Daily Report. The exact location of the initial phase shall be indicated for future reference and comparison with follow-up phases.

**Follow-Up Phase:** Inspect and test as work progresses to ensure compliance with contract requirements until completion of work.

**Additional Preparatory and Initial Phases:** Additional preparatory and initial phases may be required on the same feature of work for the following reasons:

The quality of ongoing work is unacceptable.

Changes occur in the applicable quality control staff, on-site production supervision, or work crew.

Work on a particular feature of work is resumed after a substantial period of inactivity.

## **Documentation**

Maintain Quality Control Daily Reports, Daily Test Report Information Sheets, and Accessibility Inspection Reports (attached) of quality control activities and tests.

Quality Control Daily Reports may not be substituted for other written reports required under clauses of the contract, such as Disputes, Differing Site Conditions, or Changes.

## **Enforcement**

The Contractor shall stop work on any item or feature pending satisfactory correction of any deficiency noted by the quality control staff or the Contracting Officer.

### **2.3.7 Working Hour Restrictions**

All work and deliveries shall be limited to the weekday hours of 7:00 am to 5:00 pm unless otherwise approved by the Contracting Officer. No work shall occur on holidays or weekends without prior approval.

### **2.3.8 Temporary Services**

Temporary materials may be new or used but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate the requirements of applicable codes and standards.

**Fire Protection Equipment:** Observe and enforce standards of fire prevention. No open fires shall be allowed.

**Vehicles and Equipment:** Provide one fire extinguisher on each vehicle or piece of equipment. Extinguishers shall have a minimum UL rating of 2-A:10-B: C. A capable and qualified person shall be placed in charge of fire protection. The responsibilities shall include locating and maintaining fire protective equipment and establishing and maintaining safe torch-cutting and welding procedures.

**Hazard Control:** Take all necessary precautions to prevent fire during construction. Do not store flammable or combustible liquids in existing structures. Provide adequate ventilation during the use of volatile or noxious substances.

**Smoking:** Smoking within buildings or temporary storage sheds is prohibited.

**Welding:** Cutting by torch or welding shall be performed only when adequate fire protection is provided.

**Electricity and Lighting:** Coordinate work with Contracting Officer. Temporary electrical work shall meet the requirements of the current version of NFPA 70 (NEC) Article 590. When temporary connections are removed, restore existing utility services to their original condition.

**Telephone:** The DBC shall decide with the local telephone company and pay all costs if the DBC wants to have job-site telephone service.

**Water:** Coordinate work with Contracting Officer.

**Heating and Cooling:** Furnish temporary heating and cooling. Use of permanent heating and cooling system shall not be allowed without written authorization from Contracting Officer. When the permanent heating and cooling system is approved for use as temporary heating and cooling, pay all costs until final acceptance. Install new filters before final acceptance. Equipment warranties shall start on the date of Final Acceptance.

**Sanitary Facilities:** Coordinate work with Contracting Officer

### **2.3.9 Access**

Coordinate construction efforts with the Contracting Officer such that there is minimal impact on the work of the Owner's personnel and the visiting public.

During the construction of the scheduled facilities, the Design-Build Contractor shall have continuous access to the site.

### **2.3.10 Existing Utilities**

Disruptions of services shall be kept to a minimum. The contractor shall coordinate with the local utility companies. All disruptions shall be arranged at least 48 hours in advance with the Owner and must be approved by Contracting Officer.

Construction procedures will prevent accidental disruptions to facilities outside the project limits by investigating of existing utilities and protection during construction: accidental disruptions shall be remedied at no cost to the Owner.

### **2.3.11 Hauling Restrictions**

Comply with all legal and local load restrictions in the hauling of materials.

### **2.3.12 Accident Prevention**

**Accident Prevention Program:** Prior to the Preconstruction Meeting, submit an accident prevention program. The program must be accepted by the Owner before any on-site work can begin. The program shall comply with OSHA and project requirements. Include the following:

Name of the responsible supervisor to carry out the program; monthly safety meetings; first aid procedures; outline of each phase of work, hazards associated with each phase and methods proposed to ensure property protection and safety of the public, Owner staff and DBC employees; training; planning for possible emergency situations; housekeeping and fire protection.

**Accident Reporting:** Reportable accidents, defined as death, occupational disease, traumatic injury to contractor's personnel, Owner employees or the public, property damage of any accident in excess of \$100 and fires, must be reported within seven days. Complete an Accident/Property Damage Report and forward it to the Contracting Officer.

**Quality Assurance:** Ensure that all employees are physically qualified to perform their assigned duties in a safe manner. Do not allow employees to work if their abilities are impaired. Operators of all equipment shall be able to understand signs, signals and operating instructions and be capable of operating such equipment.

**Accident Prevention Products: Provide the following:**

- First aid facilities.
- Personnel protective equipment: Meet requirements of NIOSH and MSHA.
- Emergency instructions, including telephone numbers and reporting instructions for the ambulance, physician, hospital, fire department and park police. Place in conspicuous locations at the worksite.
- Adequate egress at all times in accordance with the Standard for Safeguarding Construction, Alteration, and Demolition Operations (NFPA 241).
- Hard hats for all employees and for up to 6 visitors.
- Designate and post signs in all hardhat areas.

**Training:** Provide training for first aid and hazardous material handling and storage.

### **2.3.13 Temporary Controls**

Housekeeping: Keep the project neat, orderly, and in a safe condition at all times.

Weather Protection: When inclement weather is expected, provide temporary protection for areas where roofing, siding, windows, doors or other enclosing elements have been removed or have not been installed. Inspect protective coverings frequently to ensure that they are functioning correctly.

### **2.3.14 Project Close-out**

**Project Record Drawings:** Maintain one complete full-size set of contract drawings and one full-size set of vendor-supplied drawings. Clearly mark changes, deletions, and additions to show actual constructed conditions. Keep record drawings current. Certification of accuracy and

completeness will be required for monthly payment requisitions. On completion of the total project, submit complete record drawings.

**As-Constructed Drawings:** Provide as-constructed drawings by updating the Approved DB Construction Drawing AutoCAD files with the information provided on the record drawings, contract modifications, and other applicable shop drawings, sketches, and data. AutoCAD files should be in compliance with National CAD standards.

Provide as-constructed drawings in the following formats:

- 1 CD-ROM, with drawing files in both PDF and AutoCAD formats
- 1 full-size paper copy

Electronic and hard copy submissions shall comply with 100% Complete DB Construction Documents Submittal Formats on the DB Website.

**Posted Operating Instructions:** Furnish operating instructions attached to or posted adjacent to equipment. Include wiring diagrams, control diagrams, control sequence, start-up adjustment, operation, lubrication, shutdown, safety precautions, procedures in case of equipment failure and other items of instruction recommended by the manufacturer.

**Cleaning:** Before scheduling the final inspection, remove all tools, equipment, surplus materials, and rubbish. Restore or refinish surfaces that are damaged due to work of this contract to original condition. Remove grease, dirt, stains, foreign materials, and labels from finished surfaces. Thoroughly clean building interiors. Pick up and remove all construction debris from the site. At the time of final inspection, the project shall be thoroughly clean and ready for use.

Before submitting a request for final inspection, submit the following:

- Project Record Drawings and As-Constructed Drawings: As specified above.
- Guarantees and Bonds: As specified in Performance Requirements and Specifications.
- Spare Parts and Materials: As specified in Performance Requirements and Specifications
- Operation and Maintenance Data: As specified below and in Performance Requirements and Specifications.
- Operating Tools: As specified in the individual sections.
- Special Tools: One set of special tools required to operate, adjust, dismantle, or repair equipment. Special tools are those not typically found in the possession of mechanics or maintenance personnel.
- System Demonstration and Training: As specified below and in Performance Requirements and Specifications.
- Mechanical and Electrical Systems: Verify the following in writing: ✦ All systems are complete.
  - ✦ All systems have been properly started and are operational.

- ✦ All controls are complete and operational, and sequences have been checked and are functioning properly.
- Testing and Balancing Report: As required in the technical specifications.

**Operation and Maintenance Data:** Provide one 3-ring binder with operation and maintenance data to the Contracting Officer for review prior to the final inspection. Data shall include manufacturer's standard literature, equipment data sheets, vendor-furnished as-built drawings; custom written data not included in manufacturer's standard literature; schedules, warranties, parts lists, test results, and subcontractor list.

**System Demonstration and Training:** Train designated personnel in adjustment, and operation, including seasonal and emergency operations, if applicable; maintenance; and safety requirements of equipment and systems. Instructors shall be thoroughly trained in operating theory as well as practical operation and maintenance work for each type of equipment or system. The sequence of the training shall follow the approved outline of the training guide. Operating and Maintenance Data. Individual sections specify the duration of training required. If no duration is listed, provide training of sufficient duration to cover the subjects adequately.

### **2.3.15 Substantial Completion and Final Inspection**

Submit written certification to the CO that the project is substantially complete and request a final inspection. Upon receipt of the written request that the project is substantially complete, the Contracting Officer will proceed with an inspection within 10 days of receipt of the request or will advise the Contractor of items that prevent the project from being designated as substantially complete.

When work is determined to be substantially complete, the Contracting Officer will prepare a list of deficiencies ("Punch List") to be corrected before final acceptance. The Contracting Officer will issue a Letter of Substantial Completion. If work is not determined to be substantially complete, the Contracting Officer will notify the DBC in writing. After completing work, the DBC shall resubmit certification and request a new final inspection.

If, following final inspection, the work is determined to be substantially complete, Contracting Officer will prepare a list of deficiencies to be corrected before final acceptance and issue a Letter of Substantial Completion. The contractor shall complete the work described on the list of deficiencies within 30 calendar days, as weather permits. If the Contractor fails to complete the work within this time frame, the Contracting Officer may either replace or correct the work with an appropriate reduction in the contract price or charge for re-inspection costs in accordance with the Inspection of Construction clause of the contract.

**Acceptance of the work:** After all deficiencies have been corrected, the Contracting Officer will issue a Letter of Final Acceptance.

