

INTRODUCED BY: COUNCIL MEMBER (s) Keuler

8 **WHEREAS**, Jefferson County, Missouri, (hereafter, the “County”) in response to
9 certain Invitations for Bid and Requests for Proposals issued by the County received bids
10 and proposals for the following items or services:

11 BID NAME

12 Rebid County Jail Shower Renovations

13 **NUMBER OF BIDS RECEIVED**

14 2

15 DATE OF BID OPENING

16 12-6-2016

17 **WHEREAS**, after reviewing the bids and proposals set forth above, the
18 Department of Public Works has determined that certain bids and proposals represent the

FILED

DEC 29 2016

1 lowest and best bid for the respective items or services and met the bid or proposal
2 specifications issued by the County; and

3 **WHEREAS**, the Jefferson County, Missouri, Council finds it is in the best interest
4 of the County to award the bids and proposals to Boyer Building & Design, Inc. for a term
5 from 12-27-16 to 12-26-17 upon approval by the County Council and County Executive
6 for the total amount up to **\$272,299.00** subject to budgetary limitations.

7 **BE IT ENACTED BY THE JEFFERSON COUNTY, MISSOURI, COUNCIL,**
8 **AS FOLLOWS:**

9 Section 1. The County awards the following bids and proposals which are
10 incorporated by this reference as if fully set out herein, to the lowest and best vendor
11 bidding for each respective item or service as follows:

12 BID NAME

13 Rebid County Jail Shower Renovations

14 TERM

15 12-27-16 to 12-26-17

16 Upon approval by the County Council and County Executive

17 AMOUNT

18 Up to **\$272,299.00**

19 subject to budgetary limitations

20 AWARDED BIDDER

21 Boyer Building & Design, Inc.

1 Section 2. The Jefferson County, Missouri, Council hereby authorizes the
2 County Executive to execute the agreement incorporated by Reference as Exhibit "A" and
3 any agreements or contracts necessary to effectuate the award of the bids and proposals set
4 forth in this Ordinance. The County Executive is further authorized to take any and all
5 actions necessary to carry out the intent of this Ordinance. An unexecuted copy of the
6 Agreement is attached hereto as Exhibit "A" and incorporated herein, by reference.

7 Section 3. Copies of all Invitations for Bid, Requests for Proposals, responses
8 thereto, and any contracts or agreements shall be maintained by the Department of the
9 County Clerk consistent with the rules and procedures for the maintenance and retention
10 of records as promulgated by the Secretary of State.

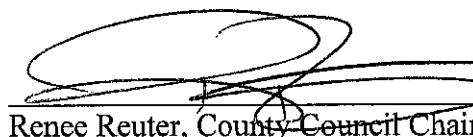
11 Section 4. This Ordinance shall be in full force and effect from and after its
12 date of approval. If any part of this Ordinance is invalid for any reason, such invalidity
13 shall not affect the remainder of this Ordinance.

THIS BILL BEING DULY INTRODUCED, THE MEMBERS OF THE JEFFERSON COUNTY, MISSOURI, COUNCIL VOTED AS FOLLOWS:

Council Member District 1, Don Bickowski	<u>Yes</u>
Council Member District 2, Renee Reuter	<u>Yes</u>
Council Member District 3, Robert Boyer	<u>Yes</u>
Council Member District 4, George Engelbach	<u>Absent</u>
Council Member District 5, Oscar J. "Jim" Kasten	<u>Yes</u>
Council Member District 6, Cliff Lane	<u>Yes</u>
Council Member District 7, James Terry	<u>Yes</u>

THE ABOVE BILL ON THIS 27th DAY OF December, 2016:

✓ PASSED FAILED



Renee Reuter, County Council Chair

Pat Schlette
Pat Schlette, Council Administrative Assistant

THIS BILL WAS ✓ APPROVED BY THE JEFFERSON COUNTY EXECUTIVE AND ENACTED AS AN ORDINANCE OF JEFFERSON COUNTY, MISSOURI, THIS 28th DAY OF DECEMBER, 2016.

THIS BILL WAS VETOED AND RETURNED TO THE JEFFERSON COUNTY, MISSOURI, COUNCIL WITH WRITTEN OBJECTIONS BY THE JEFFERSON COUNTY EXECUTIVE, THIS DAY OF , 2016.

Kenneth B. Waller

Kenneth B. Waller, Jefferson County, Missouri, Executive

ATTEST:

Wes Wagner

Wes Wagner, County Clerk

BY: *Katherine E. Missey*

First Reading: 12-27-2016



JEFFERSON COUNTY
DEPARTMENT OF ADMINISTRATIVE SERVICES
729 MAPLE ST / PO BOX 100
HILLSBORO MO 63050
WWW.JEFFCOMO.ORG

EXHIBIT

A

**Invitation for Bid: REBID COUNTY JAIL SHOWER
RENOVATIONS**

Date Issued: 11-8-2016

BIDS SHALL BE ACCEPTED UNTIL: TUESDAY, DECEMBER 6, 2016, AT 2:00 P.M. LOCAL TIME.

Specification
Contact:
JASON JONAS
Department of Public Works
636-797-5369
jjonas@jeffcomo.org

Contract
Contact:
VICKIE PRATT
Department of Administrative Services
636-797-5380

**Mail (3) Three
Complete Copies
With Vendor And
Bid Information As
Shown In Sample:**

Contract Term:
UPON APPROVAL OF THE
COUNTY COUNCIL AND
COUNTY EXECUTIVE

**Vendor
Information:**

SAMPLE ENVELOPE

<i>VENDOR NAME</i>	
<i>VENDOR ADDRESS</i>	
<i>CONTACT NUMBER</i>	DEPARTMENT OF THE COUNTY CLERK
	JEFFERSON COUNTY MISSOURI
	729 MAPLE ST / PO BOX 100
	HILLSBORO MO 63050-0100
SEALED BID: <i>(BID NAME)</i>	

The undersigned certifies that he/she has the authority to bind this company in an agreement/contract to supply the commodity or service in accordance with all terms, conditions, and pricing specified. This Bid, if accepted, will constitute an Agreement and Contract with Jefferson County, Missouri, upon approval of the County Council and County Executive. Prices are firm during this agreement term, unless agreed upon in writing by the County. The County has the option to renew this agreement at the same terms and conditions as the original agreement for one additional one-year term with the written consent of the successful Bidder. Price increases for renewals are not authorized unless approved in writing by the County.

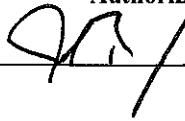
Boyer Bldg & Design, Inc	Joshua Boyer	
Company Name	Authorized Agent (Print)	
1701 Towne View Dr		
Address	Signature	
DeSoto, MO 63020	President	
City/State/Zip Code	Title	
636-337-9119	12/6/2016	81-3952466
Telephone #	Date	Tax ID #
Boyerbldg@att.net	636-586-9810	
E-mail	Fax #	

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REQUIRED DOCUMENTS

1. Current and valid Certificate of Insurance or binder showing required insurance coverage must be provided with each bid.
(County must be added as additional insured if awarded)
- 2a. Proof that Bidder does not owe delinquent real or personal property in Jefferson County (tax receipts for past 3 years)
Obtain receipts at <http://jeffersonmo.devnetwedge.com>
Or
- 2b. A notarized affidavit stating that the applicant does not own any real estate or personal property in Jefferson County on company letterhead.
3. A Notarized affidavit of work authorization and current business entity status with E-verification documentation. (pages 9 & 10)
4. Agreement to be executed by the County upon approval by the County Council and County Executive. (Bidder is required to complete company information and execute signature)
5. Cooperative Bid Form (last page)
6. All pages of the Invitation for Bid/Request for Proposal must be used when submitting your bid/proposal response along with initialing each page with the bid/proposal. Additional information may be included separately.
7. Bid deposits/bonds must be in the exact amount as stipulated in the bid. (if required)

***BIDS WILL BE REJECTED IF REQUIRED DOCUMENTATION IS NOT INCLUDED OR COMPLETED**

1.0 BID REQUIREMENTS

Bidder shall initial all pages and return where the Bid Document denotes "BIDDER'S INITIALS: _____"

1.1 BID SUBMISSION:

Submit bid form in original (one original) and two (two copies) with all specification pages, if applicable. No facsimile or electronic bids shall be accepted and shall be rejected. The Vendor prior to the submission dead line as stated on page 1 must submit all bids. Late bids will not be accepted and returned to the vendor unopened. The County reserves the right to request additional written or oral information from Respondents in order to obtain clarification. A fully executed Affidavit is required by Section 285.530 RSMo and shall be submitted with the bid form. A copy of the Affidavit is attached hereto. Failure to execute the Affidavit shall result in the bid being rejected. Failure to comply with any provision, provide any required documentation, insurance forms or deposits or bonds in exact amounts or any other term or condition that is not in strict conformance shall result in the bid being rejected.

1.2 BASIS OF BID AWARD:

Award may be made on an item-by-item basis to the lowest and best Bidder(s) or award may be made to the lowest and best bid total, whichever provides the greatest value to the County from the standpoint of suitability to purpose, quality, service, previous experience, price, ability to deliver, or any other reason deemed to be in the best interest of the County. Quantities stated herein represent an estimate for the period stated. Orders shall be placed for actual requirements as needed. The County may reject any or all bids for any reason and may waive any informality. Bids submitted from a Missouri State Contract shall include a copy of the State Contract with the bid. Bid award does not constitute an order or obligation to order by the County. The issuance of a Purchase Order Number shall be construed as acceptance of a Contract with all terms, conditions, and prices firm during the length of the agreement terms.

1.3 BID AWARD:

It is further agreed that the Contract shall not be valid and binding upon the County until approved by the County Counselor, as to legal form and is subject to the Ordinances, Resolutions and Orders of Jefferson County, Missouri, and State and Federal Law. If no Bid or Bids have been awarded by the County Council within forty-five (45) days following the opening of the bids then all bids will be deemed Rejected.

1.4 BID PREPARATION:

1. Bidders are responsible for examination of drawings, specifications, schedules and instructions. Failure to do so will be at the Bidder's risk.
2. Each Bidder shall furnish the information required by the invitation. The Bidder shall sign all required documents. All deletions and erasures shall be initialed
3. Alternate bids for supplies or services other than specified shall not be considered unless authorized by invitation.
4. Bidder shall state a definite time for delivery of goods or for performance of services unless otherwise specified in the invitation for bid.
5. When specified, samples must be timely submitted and at no expense to the County.
6. Failure to adhere to all requirements may result in the response being disqualified as non-responsive.

1.5 MODIFICATION OR WITHDRAWAL OF BIDS:

Bids may be modified or withdrawn prior to the exact hour and date specified for receipt of bids, provided the modification or withdrawal is in writing and is delivered in the same manner as a bid submission.

1.6 LATE BIDS:

It is the responsibility of the Bidder to deliver his bid or bid modification on or before the date and time of the bid closing to the Department of the County Clerk. Bids received late will be rejected and returned unopened to the Bidder.

1.7 BID DEPOSITS/BONDS:

Bid Deposits/Bonds are not required unless specified in the specifications. Bid deposits/Bonds must be in the exact amount as stipulated in the bid.

1.8 MATERIAL AVAILABILITY:

Bidders must accept responsibility for verification of material availability, product schedules and other pertinent data prior to submission of bid and delivery time. It is the responsibility of the Bidder to notify the County immediately if the materials specified are discontinued, replaced, or not available for an extended period of time. All materials ordered by the County, shall be as needed. A sample of materials may be requested.

1.9 ALTERNATE BIDS:

Alternate Bids for items will be accepted except when stated "NO SUBSTITUTIONS". Bidders must submit complete specifications on all alternate bids with the bid form. Alternate bids without complete specifications may be rejected. Alternate bids and exceptions to bid clauses must be clearly noted on the bid form. The County may accept or reject alternate bids; whatever is most advantageous to the County.

1.10 INCORPORATION OF DOCUMENTS:

The terms of the Bid Invitation, Bid Specifications, Bid Form are and shall be incorporated into the contract as if fully setout therein. The Bid, if accepted and approved by the County Council and County Executive shall constitute the terms of a Contract or Agreement with Jefferson County, Missouri, subject to any further Amendments, Memoranda or other documents or specifications which must be set forth in writing and signed by all parties.

1.11 ADDENDA:

Addenda to bid specifications are incorporated by reference as if fully setout herein. It is the responsibility of the vendor to insure and verify that they are in receipt of and completed all attached addenda's prior to submission of bid forms. Verification is made by contacting the Office of Contracts and Grants at (636) 797-5380, or by reviewing the County Web Site. (www.jeffcomo.org).

1.12 INSURANCE:

The Vendor/Contractor shall purchase and maintain insurance with an insurance company licensed to do business in the State of Missouri or in the state where the vendor is incorporated or otherwise licensed to do business and which shall remain, at all times during the term of any contract with the County, in full force and effect. Preference will be given to a Vendor/Contractor who provides insurance with an insurance company licensed to do business in the State of Missouri, but in any event said Vendor/Contractor shall provide said insurance at its own expense. Such insurance shall be provided as will protect the Vendor/Contractor from claims which may arise out of or result from the Vendor/Contractor's execution of the work, whether such execution be by himself, his employees, agents, or by anyone for whose acts any of them may be liable. If any such work covered by the Contract is to be performed on County owned or leased premises, the Vendor agrees to carry liability and workman's compensation insurance, satisfactory to the County, and to indemnify the County against all liability, loss, and damage arising out of any injuries to persons and property caused by the Vendor, his sub-contractors, employees or agents. The insurance coverage shall be such as to fully protect the County and the general public from any and all claims for injury and damage resulting by any actions on the part of the Vendor/Contractor or its' forces as enumerated above. All policies must name the County as an additional insured and provide for thirty (30) days written prior to any material changes or cancellation. Any disputes regarding a breach, insurance amounts, liability, coverage, lapse or otherwise shall be litigated in the Circuit Court of Jefferson County, Missouri and the same shall be incorporated into any Contract agreed to by the parties.

THE COUNTY REQUIRES A CURRENT AND VALID CERTIFICATE OF INSURANCE OR BINDER SHOWING REQUIRED INSURANCE COVERAGE MUST BE PROVIDED WITH EACH BID. JEFFERSON COUNTY MUST BE ADDED AS AN ADDITIONAL INSURED AFTER AWARD OF THE BID. ANY LAPSE IN INSURANCE COVERAGE OR CANCELLATION THEREOF BY THE CONTRACTOR OR SUB-CONTRACTORS DURING THE TERMS OF THE CONTRACT SHALL IMMEDIATELY BE DEEMED A MATERIAL BREACH UNDER THE TERMS OF ANY CONTRACT.

A. Required Not Required **Comprehensive General Liability Insurance**

The Vendor/Contractor shall maintain and keep in full force and effect during the terms of this Contract such comprehensive general liability insurance as shall protect them from claims which may arise from operations under this Contract, whether such operations be by themselves or by anyone directly or indirectly employed by them. The amounts of insurance shall be not less than \$1,000,000.00 combined single limit for any one occurrence covering both bodily injury and property damage, including accidental death.

B. Required Not Required **Professional Liability Insurance**

The Vendor/Contractor shall provide the County with proof of Professional Liability Insurance, which shall protect the County against any and all claims, which might arise as a result of the operation of the Vendor/Contractor in fulfilling the terms of this Contract during the life of the Contract. The minimum amounts of such insurance will be \$1,000,000.00. Should any work be subcontracted, these limits will also apply.

C. Required Not Required **Worker's Compensation Insurance:**
per Missouri Revised Statutes Chapter 287

The Vendor/Contractor or his sub-contractor or contractors, shall maintain and keep in force of this Contract such worker's compensation insurance limits as required by the statutes of the State of Missouri and Employer's Liability with limits no less than \$500,000.00.

1.13 BID SUBMISSIONS

Bids submitted on separate forms are NOT acceptable unless specified in the Bid Document. Failure to complete bid forms to the satisfaction of the County may result in rejection of your bid. It is the responsibility of each Bidder before submitting a bid to examine ALL documents thoroughly, and request written or oral interpretation of clarifications soon after discovering any conflicts, ambiguities, errors, or omissions in the bidding documents. Request for clarification must be received prior to bid openings.

1.14 BID OPENINGS

Bids will be publicly opened and read aloud at the time indicated on page 1. The Bidders and the public are invited but not required to attend the formal opening of the bids. No decisions relating to the award of a contract or agreement will be made at the opening.

1.15 BID TABULATIONS

Bid Tabulations are not available for 5 to 7 business days following the Bid Opening. Bid submissions are open for public review at the time of the Bid Opening. Bid tabulations are posted on the County's web-site address, www.jeffcomo.org. **NO COPIES** of bid tabulations are sent to vendors.

2.0 BID RESPONSE AND CONTRACT

2.1 BIDDER REPRESENTATIONS:

The Bidder, by executing the Bid form certifies that:

- A. The bid complies with Invitation for Bid form and Bid Specifications.
- B. Bidder is not debarred or suspended from participation in Federal Assistance programs.

2.2 TAXES:

No bid or proposal shall be awarded by Jefferson County unless the prospective Bidder provides proof that the Bidder does not owe delinquent real or personal property taxes to Jefferson County. The prospective Bidder is required to provide proof in the form of an original paid tax receipt issued by the Jefferson County Collector or a verified affidavit stating that the applicant does not own any real or personal property in Jefferson County. Tax receipts for the past 3 years are required and may be obtained at <http://jeffersonmo.devnetwedge.com/> or a notarized affidavit stating that the applicant does not own any real or personal property in Jefferson County on company letterhead.

Section 135.040 of the Jefferson County Code of Ordinances (Ord. No. 10-0411) requires that no bid or proposal shall be awarded by Jefferson County unless the prospective Bidder provides proof that the Bidder does not owe delinquent real or personal property, or that the Bidder does not own any real or personal property in Jefferson County. All delinquent real or personal property taxes shall be paid, in-full, prior to the award of any bid, or proof shall be provided that the Bidder does not own any real or personal property in Jefferson County prior to the award of any bid. Jefferson County considers that the failure to pay any and all real or personal property taxes due Jefferson County, Missouri, the failure to report all real or personal property owned, held or used in Jefferson County, the failure to provide proof thereof, and/or the failure to keep said tax bills current shall be deemed a material breach of the contract and will subject the contract to immediate cancellation. All taxes, due and owing, must be paid in full at the time the bid is awarded by Jefferson County and remain paid during the entire term of the contract unless the prospective Bidder provides proof that the Bidder does not own real or personal property in Jefferson County. This requirement shall not apply to the award of bids for projects which are funded in whole or in part by Federal funds.

2.3 CERTIFICATION OF INDEPENDENT PRICE DETERMINATION:

- A. The prices in the bid shall be independently determined, without consultation, communication, or agreement for the purpose of restricting competition as to any matter relating to price with any Bidder or other person.
- B. Unless otherwise required by law, the prices shall not have been knowingly disclosed by the Bidder prior to opening.
- C. No attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a bid.

2.4 PRICE:

The price(s) specified in this bid shall be firm and not subject to contingency or reservation. If the Vendor fails to honor stated prices as submitted in the Bid Form or Contract, the County reserves the right to obtain the same items from the next lower vendor who submitted a bid price for the item. The original vendor shall be responsible for the difference in price and required to make restitution to the County for the difference in price. The Bidder represents prices specified in the bid do not exceed current selling price for the same or substantially similar good or service, and are the same as or lower than other prices charged to the Bidder's most favored customer. In the event the stated prices are determined to be higher than the prices for which Supplier has sold the items, or services, to others, this contract price shall be reduced accordingly. **Bid prices are ALL INCLUSIVE: (Shipping, Handling, Delivery, and Assembly to locations specified by the County). Prices shall be firm for ALL County departments and locations for term of the agreement.**

2.5 MISSOURI DOMESTIC PRODUCT PROCUREMENT ACT:

Bidder represents that the goods provided comply with Sections 34.350 to 34.359, RSMo, known as the Domestic Product Procurement Act. The Act encourages the purchase of products manufactured or produced in the United States, State of Missouri, and Jefferson County, Missouri. Bidder shall include proof of compliance with the Act with the bid when requested.

2.6 NON-EXCLUSIVE AGREEMENT:

The contractor shall understand and agree that the contract shall not be construed as an exclusive agreement and further agrees that the County may secure identical and/or similar services or products from other sources at anytime in conjunction with or in replacement of the contractor's services.

2.7 DEFINITIONS:

- A. The term "County" means the Jefferson County, Missouri and its designated representatives.
- B. The term "Vendor" means Supplier, Contractor, and Seller and includes designated representatives.
- C. The term "IFB" means Invitation for Bid.
- D. The term "Agreement/Contract" means Binding Agreement, Contract, Request for Purchase, Order.

2.8 INSPECTION, ACCEPTANCE AND APPROVALS:

Goods shall at all times and places, including the period of manufacture, are subject to inspection and test by County. County will accept or give notice of rejection of goods delivered within a reasonable time after receipt. Acceptance shall not waive any warranty. All goods supplied are subject to final inspection and acceptance by County notwithstanding payment, prior inspections or approvals. County may require prompt replacement or correction of rejected goods at Supplier's expense, including a reduction in price for rejected goods. Supplier shall not resubmit rejected goods to County without prior written approval and instructions from County. In addition, Supplier shall identify resubmitted goods as previously rejected. Supplier shall provide and maintain a quality assurance and control system acceptable to County.

2.9 WARRANTY:

Unless otherwise agreed to in writing by the parties, Supplier warrants that items ordered to specifications will conform thereto and to any drawings, samples or other descriptions furnished or adopted by County, or, if not ordered to specifications will be fit and sufficient for the purpose intended, and that all items will be new, merchantable, of good material and workmanship, and free from defect. Such warranties, together with Supplier's service warranties and guarantees, if any, shall survive inspection, test, acceptance of, and payment for the items and shall run to County and its assigns. Except for latent defects, the County shall give notice of any nonconformity to the Supplier within one (1) year after acceptance. County may return for credit or require prompt correction or replacement of the defective or non-conforming goods or have the defective good corrected or replaced at Supplier's expense. Return to Supplier of any defective or non-conforming goods and delivery to County of any corrected or replaced goods shall be at Supplier's expense. Defective or non-conforming items shall not be corrected or replaced without written authorization by County. Goods required to be corrected or replaced shall be subject to the provisions of this clause and the clause hereof entitled "Inspection, Acceptance and Approvals" in the same manner and to the same extent as goods originally delivered under this contract.

2.10 PAYMENT:

County will pay Supplier for goods upon delivery to, submission of certified invoices with attached tipping fee receipts and acceptance. The County will not be responsible for articles or services furnished without a purchase order. Price is tax-exempt.

2.11 CHANGE ORDER:

County may make changes within the general scope of this contract. If any such changes cause an increase or decrease in the cost of or the time required for the performance of any part of the work, whether changed or not changed by any such order, an equitable adjustment shall be made in the price or delivery schedule or both, and any change order shall be in writing. Any claim by a Supplier for adjustment under this clause shall be asserted within fifteen (15) days from the date of receipt of this written order directing the change, provided, however, County, if it decides that the facts justify such action, may receive and act upon such claim asserted at any time prior to final payment.

2.12 DELIVERIES:

Deliveries shall be made in strict accordance with any delivery schedule contained in the bid specification or contract and in the exact quantity ordered. Failure to adhere to delivery schedule is reason for termination in accordance with the "termination" clause. Deliveries are to be made at locations specified by the County at time of Order.

2.13 RESPONSIBILITY FOR SUPPLIES:

Pursuant to Section 290.560 RSMo, Supplier/Contractor shall employ only Missouri laborers and laborers from nonrestrictive states except that other laborers may be used when Missouri laborers or laborers from nonrestrictive states are not available, or are incapable of performing the particular type of work involved, if so certified by the contractor and approved by the County. Except as otherwise provided, Supplier shall be responsible and bear all risks for loss and damage to goods until delivery at County's facilities, regardless of F.O.B. point, point of inspection or acceptance; and if the goods are rejected.

2.14 SUBCONTRACTS:

Supplier shall not enter into any subcontract(s) in excess of \$25,000 or 20% of this contract price; whichever is less, for any goods without County's prior written approval.

2.15 CHOICE OF LAW:

This bid and contract shall be governed and interpreted according to the laws of the State of Missouri. Venue for any court action shall be in Jefferson County, Missouri.

2.16 TERMINATION:

- A. General: Performance of work may be terminated by the County in whole, or from time to time in part, whenever County shall determine that such termination is in the best interests of County with a thirty (30) day written notice. The Vendor may terminate the Agreement/Contract upon a sixty (60) day prior notice in writing. In the event of any termination of the Agreement/Contract by the Vendor, the County may purchase such supplies and/or services similar to those terminated and for the duration of the Agreement/Contract period the Vendor will be liable for all costs in excess of the established contract pricing.
- B. Bankruptcy or Insolvency: In the event bankruptcy proceedings are commenced by or against Supplier or under any provisions of the United States Bankruptcy Act or for the appointment of a receiver or trustee or a general assignment for the benefit of creditors of either party, County shall be entitled to terminate without further cost or liability. The County may cancel the Agreement/Contract or affirm the Contract and hold the Vendor responsible for damages.
- C. **Section 135.040 of the Jefferson County Code of Ordinances (Ord. No. 10-0411) requires that no bid or proposal shall be awarded by Jefferson County unless the prospective Bidder provides proof that the Bidder does not owe delinquent real or personal property, or that the Bidder does not own any real or personal property in Jefferson County. All delinquent real or personal property taxes shall be paid, in-full, prior to the award of any bid, or proof shall be provided that the Bidder does not own any real or personal property in Jefferson County prior to the award of any bid. Jefferson County considers that the failure to pay any and all real or personal property taxes due Jefferson County, Missouri, the failure to report all real or personal property owned, held or used in Jefferson County, the failure to provide proof thereof, and/or the failure to keep said tax bills current shall be deemed a material breach of the contract and will subject the contract to immediate cancellation. All taxes, due and owing, must be paid in full at the time the bid is awarded by Jefferson County and remain paid during the entire term of the contract unless the prospective Bidder provides proof that the Bidder does not own real or personal property in Jefferson County. This requirement shall not apply to the award of bids for projects which are funded in whole or in part by Federal funds.**
- D. Default: County may terminate the whole Contract or any part in either of the following circumstances:
 - D-1. If supplier fails to deliver the items required by the contract within the time specified; or
 - D-2. If supplier fails to perform any of the other provisions of the contract, or so fails to make progress as to endanger performance of the contract in accordance with its terms, and in either of these two circumstances does not cure such failure within a period of ten (10) days after notice from County specifying such failure. In the event of termination under subparagraph 1, County shall have the right to procure, on such terms and in such manner as it may deem appropriate, items similar to those terminated, and to recover from Supplier the excess cost for such similar items provided, however, Supplier shall not be liable for such excess costs where the failure upon which the termination is based has arisen out of causes beyond the control of Supplier and without the fault or negligence of Supplier. Such causes shall be deemed to include fires, floods, earthquakes, strikes, and acts of the public enemy. The rights of County provided in subparagraph 1 shall be in addition to any other rights provided by law or the contract.
 - D-3. In the event of the Supplier's non-compliance with the provisions as set forth, this Contract may be cancelled, terminated or suspended in whole or in part and the supplier may be declared ineligible for further County contracts. The rights and remedies of the County provided in this paragraph shall not be exclusive but are in addition to any remedies provided in this Contract or as provided for by law.

2.17 NOTICE AND SERVICE THEREOF:

Any notice from the County shall be in writing and considered delivered and the service thereof completed when said notice is posted, by certified or regular mail, to the Supplier, at the address stated on the bid form.

2.18 CONTRACT TERM:

Performance shall be governed solely by the terms and conditions as set forth in the Invitation for Bid, Bid Specifications, Bid Form and the Contract notwithstanding any language contained on any invoice, shipping order, bill of lading or other document furnished the Seller at any time and the acceptance by the County for any goods furnished.

2.19 COMPLIANCE WITH APPLICABLE LAWS:

Supplier warrants it has complied with all applicable laws, rules and ordinances of the United States, Missouri or any other Governmental authority or agency in the manufacture or sale of the goods, including but not limited to all provisions of the Fair Labor Standards Act of 1938, as amended, including provisions of the Home Rule Charter of Jefferson County, Missouri requiring all workers performing work under any contract with Jefferson County be paid a wage that is at least the prevailing hourly rate of wages for work of

a similar character in Jefferson County and shall be paid to all workers performing work under the contract. (Section 290.250 and 290.325, RSMo).

- A. The contractor will forfeit a penalty to the contracting public body of \$100 per day (or portion of a day) for each worker that is paid less than the prevailing rate for any work done under the contract by the contractor by any subcontractor." (Section 290.250, RSMo). For detailed information on rules and occupational titles, see 8 CSR 30-3.010 through 3.060.
- B. The contractor and all subcontractors to the contract must require all onsite employees to complete the ten-hour construction safety training program and have documentation of having done so.
- C. The contractor will forfeit a penalty to the contracting public body of \$2500 plus an additional \$100 for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training. (Section 292.675 RSMo).
- D. Before any work begins, you must send a **Prevailing Wage Project Notification – Contractor Information Notification** form (PW-2) to the DLS. Send it when the contract is awarded to ensure the DLS receives it timely (Section 290.262.10, RSMo, and 8 CSR 30-3.010(3)).
- E. If a wage subsidy, bid, or rebate was provided, the supplement or rebate **must** be reported to the public body within 30 days of receipt of payment (Section 290.095, RSMo). Notification should be reported to: Contracts and Grants

County of Jefferson
PO Box 100
Hillsboro, MO 63050-0100

2.20 ACTS OF GOD:

No party shall be liable for delays, nor defaults due to Acts of God or the public enemy, riots, strikes, fires, explosions, accidents, governmental actions of any kind or any other causes of a similar character beyond its control and without its fault or negligence.

2.21 SELLER'S INVOICES:

Invoices shall contain the following information. Contract number (if any), Purchase Order Number, Item number, contract description of goods or services, sizes, quantities, unit prices and extended totals. Invoices for and inquiries regarding payment should be addressed to the County Accounts Payable Clerk.

2.22 APPROVAL:

It is agreed the acceptance of a Bid shall not be valid and binding upon the County until approved by the County Purchasing Agent, County Council, and the County Counselor.

2.23 RENEWAL OPTION:

The County reserves the right to negotiate the contract for one (1) additional one-year term with the written consent of the awarded vendor. If the contractor/vendor requests an increase in compensation for any renewal period, the vendor shall notify the Office of Contracts and Grants no less than 60 days prior to the end of the contract period. The County shall notify the Vendor of the intent to exercise the renewal option. However, failure to notify the Vendor does not waive the County's right to exercise the renewal option.

Indicate: Individual: Partnership: Corporation.

2.24 INDIVIDUAL, PARTNERSHIPS, CORPORATIONS:

Incorporated in the State of MO.

2.25 LITIGATION:

This agreement shall be interpreted under the laws of the State of Missouri. Any disagreements, questions, controversies, litigation or other causes of action whatsoever arising from or under the terms of this agreement shall be resolved in the trial courts of 23rd Judicial Circuit Court of the State of Missouri-Hillsboro, Missouri.

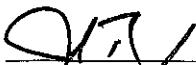
2.26 LANGUAGE: Bids and all related documents will only be accepted in the English Language.

AFFIDAVIT OF WORK AUTHORIZATION

The grantee, sub grantee, contractor or subcontractor who meets the section 285.525, RSMo definition of a business entity must complete and return the following Affidavit of Work Authorization.

Comes now Joshua Boyer (Name of Business Entity Authorized Representative) as President (Position/Title) first being duly sworn on my oath, affirm
Boyer Bldg & Design, Inc (Business Entity Name) is enrolled and will continue to participate in the E-Verify federal work authorization program with respect to employees hired after enrollment in the program who are proposed to work in connection with the services related to Jail Shower Renovations (Bid/Grant/Subgrant/Contract/Subcontract) for the duration of the grant, subgrant, contractor, or subcontractor, if awarded in accordance with subsection 2 of section 285.530, RSMo. I also affirm that Boyer Bldg & Design, Inc (Business Entity Name) does not and will not knowingly employ a person who is an unauthorized alien in connection with the contracted services related to Jail Shower Renovations (Bid/Grant/Subgrant/Contract/Subcontract) for the duration of the grant, subgrant, contract, or subcontract, if awarded.

In Affirmation thereof, the facts stated above are true and correct. (The undersigned understands that false statements made in this filing are subject to the penalties provided under section 575.040, RSMo.)



Authorized Representative's Signature

Joshua Boyer

Printed Name

President
Title

12/6/2016

Date

Subscribed and sworn to before me this 6 of December 2016. I am

(DAY)

(MONTH, YEAR)

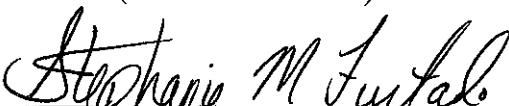
commissioned as a notary public within the County of Jefferson, State of

(NAME OF COUNTY)

MO
(NAME OF STATE)

and my commission expires on 1/20/17.

(DATE)



Signature of Notary

12/6/2016

Date



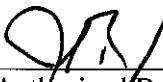
AFFIDAVIT OF WORK AUTHORIZATION

(Continued)

CURRENT BUSINESS ENTITY STATUS

I certify that Boyer Bldg & Design, Inc (Business Entity Name) **MEETS** the definition of a business entity as defined in section 285.525, RSMo pertaining to section 285.530, RSMo as stated above.

Joshua Boyer
Authorized Business Entity
Representative's Name
(Please Print)


Authorized Business Entity
Representative's Signature

Boyer Bldg & Design, Inc
Business Entity Name

12/6/2016
Date

As a business entity, the grantee, sub grantee, contractor, or subcontractor must perform/provide the following. The grantee, sub grantee, contractor, or subcontractor shall check each to verify completion/submission:

- Enroll and participate in the E-Verify federal work authorization program (Website: <http://www.dhs.gov/e-verify>; Phone: 888-464-4218; Email: e-verify@dhs.gov) with respect to the employees hired after enrollment in the program who are proposed to work in connection with the services required herein;

AND

- Provide documentation affirming said company's/individual's enrollment and participation in the E-Verify federal work authorization program. Documentation shall include a page from the E-Verify Memorandum of Understanding (MOU) listing the grantee's, subgrantee's, contractor's, or subcontractor's name and the MOU signature page completed and signed, at minimum, by the grantee, subgrantee, contractor, or subcontractor and the Department of Homeland Security – Verification Division; (if the signature page of the MOU lists the grantee's, subgrantee's, contractor's, or subcontractor's name, then no additional pages of the MOU must be submitted).

SPECIFICATIONS

MUST INCLUDE ANNUAL WAGE ORDER

JEFFERSON COUNTY JAIL

SHOWER ROOM RENOVATIONS

510 1ST STREET

HILLSBORO, MISSOURI

ARCHITECT / ENGINEERS



OATES ASSOCIATES
Engineering Architects

COLLINSVILLE | ST. LOUIS | BELLEVILLE | ST. CHARLES
CONTRACT STAN HAMPTON
PROJECT MANAGER
314.588.8511 | 20
Stan.Hampton@oatesassociates.com

www.oatesassociates.com

MO STATE CERTIFICATE OF AUTHORITY #201002449

OATES ASSOCIATES, INC.
PROJECT MANAGEMENT & ARCHITECT:

CONTRACT STAN HAMPTON

PROJECT MANAGER

314.588.8511 | 20

Stan.Hampton@oatesassociates.com



11/07/2016 | pg. 12 | 21 | Dc

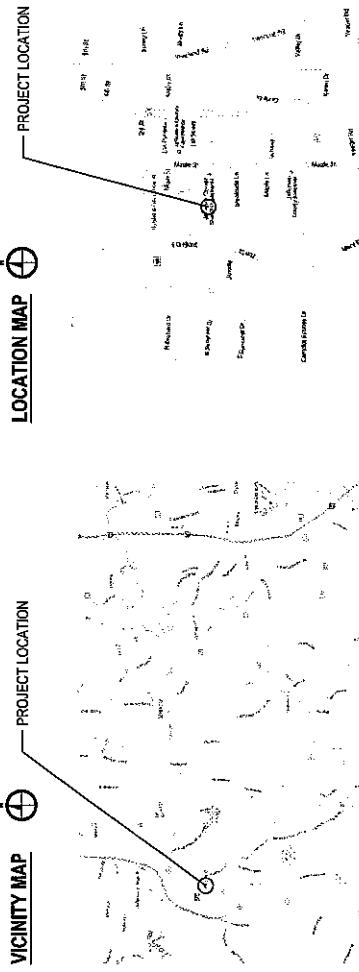
INDEX OF DRAWINGS

- G1.0.....COVER SHEET
- A0.1.....GENERAL NOTES | ABBREVIATIONS | SYMBOLS
- A1.0.....KEY PLANS
- A2.0.....DEMOLITION FLOOR PLAN
- A3.0.....RENOVATION FLOOR PLAN
- A4.0.....CEILING PLANS
- A5.0.....DETAILS

11/07/2016 - BID DOCUMENTS

12-9144

Block 1000



ABBREVIATIONS

GENERAL NOTES

SYMBOLS LEGEND

MATERIAL SYMBOLS	
	BRICK
	CONCRETE
	STEEL REBAR
	STEEL PLATE
	WOOD BLOCKING
	INSULATION
	PLASTER
	LUMBER
	ELEVATION REFERENCE
	SECTION REFERENCE
	DETAIL REFERENCE
	PARTITION NUMBER
	WINDOW NUMBER
	ROOM NUMBER
	CEILING HEIGHT
	COLUMN LINE
	DOOR NUMBER
	FLOOR NUMBER
	DRAWING NUMBER

MATERIAL SYMBOLS

KEY PLANS
SHOWER ROOM RENOVATIONS
JEFFERSON COUNTY JAIL



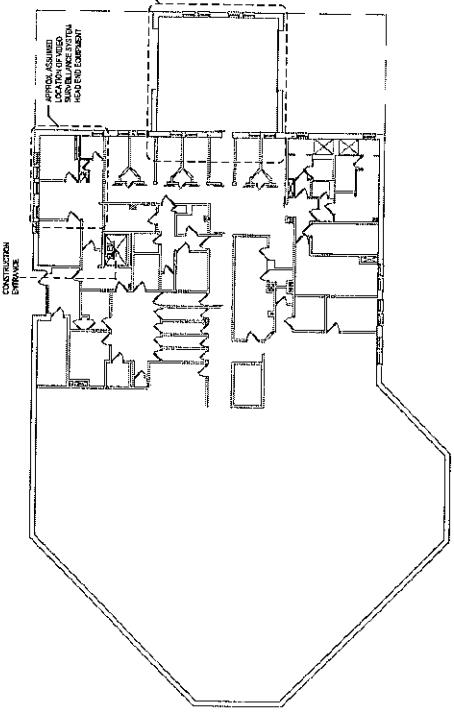
PROJECT NO.: 15136.001
DATE: 11/07/16
SHEET NO.: 10

A1.0

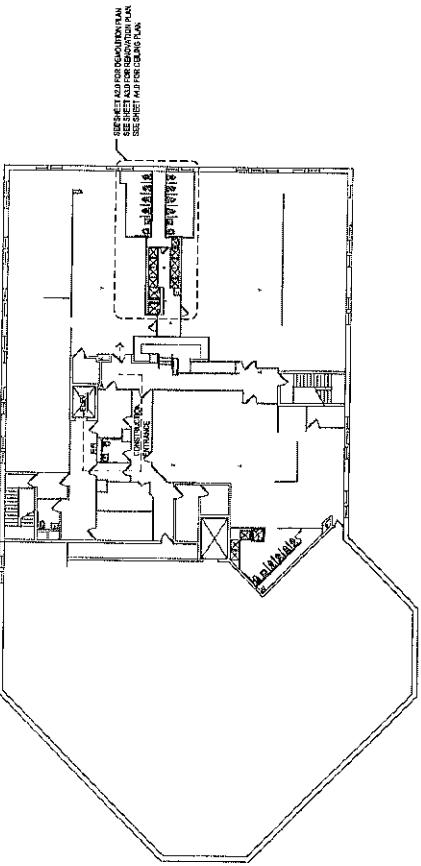
GENERAL NOTES

- COORDINATE TEMPORARY CONSTRUCTION BUILDING WITH JAILOR'S DEPARTMENT.
- ANY TEMPORARY CONSTRUCTION SHALL BE COORDINATED WITH THE SHERIFF'S DEPARTMENT.
- PLUMBING, MECHANICAL, AND ELECTRICAL CONSTRUCTION WORK IS DESIGNATED.
- SELF-SPECIFICATIONS FOR ANTENNA, TELEVISION, PLUMBING, AND ELECTRICAL INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR.
- COORDINATE LOCATION WITH SUPPORTS DEPARTMENT.

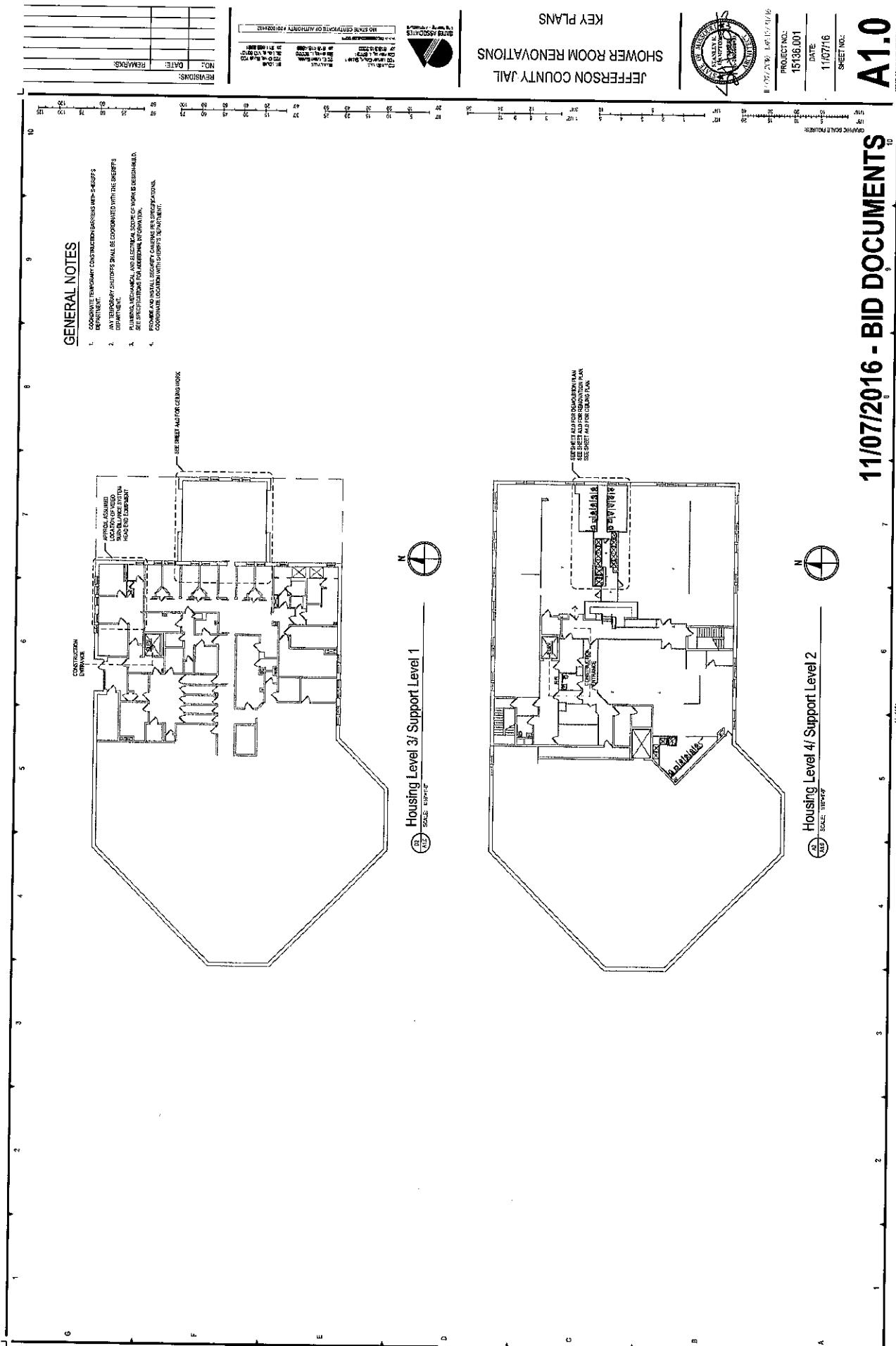
SEE SHEET A10 FOR CEILING WORK



Housing Level 3/ Support Level 1
SCALE: 1/4" = 10'-0"



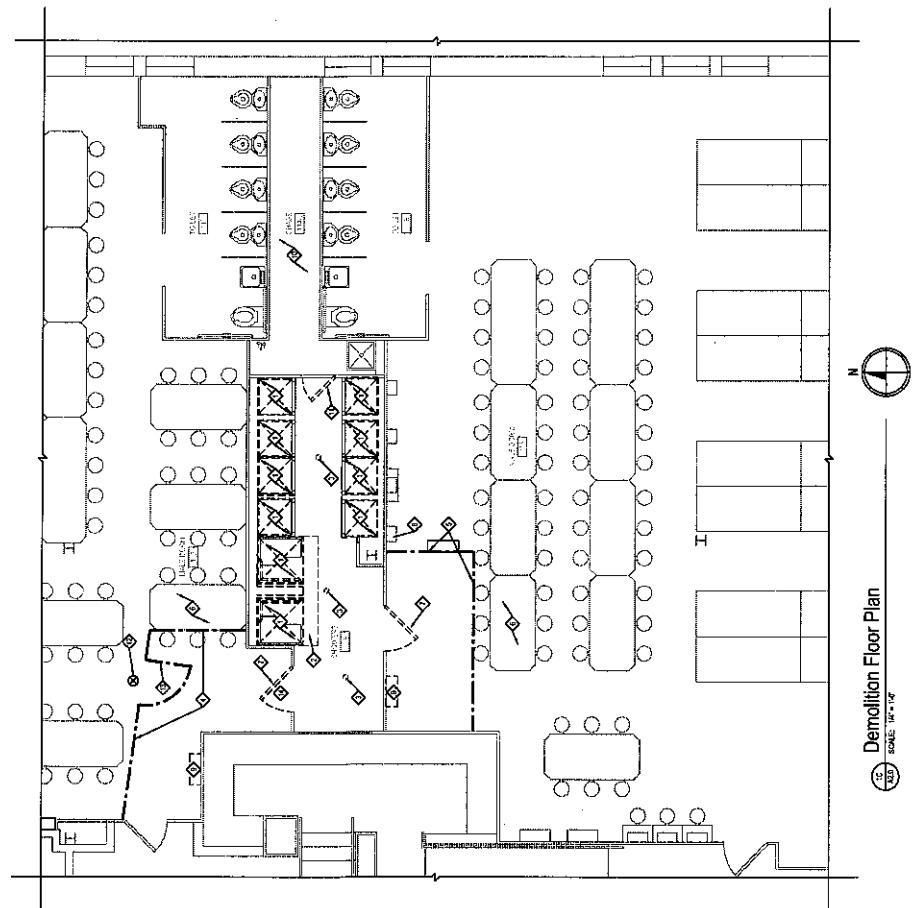
Housing Level 4/ Support Level 2
SCALE: 1/4" = 10'-0"



DEMOLITION PLAN GENERAL NOTES

1. COORDINATE TEMPORARY CONTRACTOR BUSINESSES WITH SHERIFFS
2. ANY TEMPORARY SHIFTERS SHALL BE COORDINATED WITH THE SHERIFFS
3. COORDINATE SUPPLY OF PERSONNEL WITH SHERIFFS SO THAT IT IS NOT NECESSARY FOR THE SHERIFFS TO COORDINATE WITH THE SHERIFFS AT ANY OTHER TIME.
4. TEMPORARY CONSTRUCTION CONTRACTORS MUST BE COORDINATED AND DOCUMENTED BY THE TEMPORARY SHERIFFS AS COORDINATED WITH THE SHERIFFS. THE DOCUMENTATION OF THE TEMPORARY SHERIFFS MUST BE COORDINATED WITH THE SHERIFFS.
5. PLUMBER, MECHANICAL, AND ELECTRICAL, SOURCE OF WORK IS RESPONSIBILITY OF THE SHERIFFS. SEE SECTION 5 FOR ADDITIONAL INFORMATION.
6. PROVIDE AND MAINTAIN SECURITY CAMERAS FOR INFORMATION PURPOSES.
7. PROVIDE AND MAINTAIN WORK WITH SHERIFFS DOCUMENT, REFER TO SHEET A10 FOR LESSEES/LESSEES LOCATIONS OF TEMPORARY SHERIFFS DOCUMENT.
8. EVALUATION OF CONTRACTOR BUSINESSES TO ENSURE THAT WORK IS BEING PROVIDED IN A PROFESSIONAL, FAIR, AND HONEST MANNER.
9. USE OF TEMPORARY SHERIFFS WILL NOT CREATE BIAS, AND OTHER CONTRACTORS, LOCATED IN THE STATE, WILL NOT BE DISADVANTAGED.
10. TEMPORARY SHERIFFS WILL NOT BE RESPONSIBLE FOR CONSTRUCTION COSTS.
11. SEE SHEET A10 FOR TEMPORARY SHERIFFS.

DEMOLITION PLAN KEYED NOTES



Demolition Floor Plan

Demolition Floor Plan
SCALE: 1/4" = 1'-0"

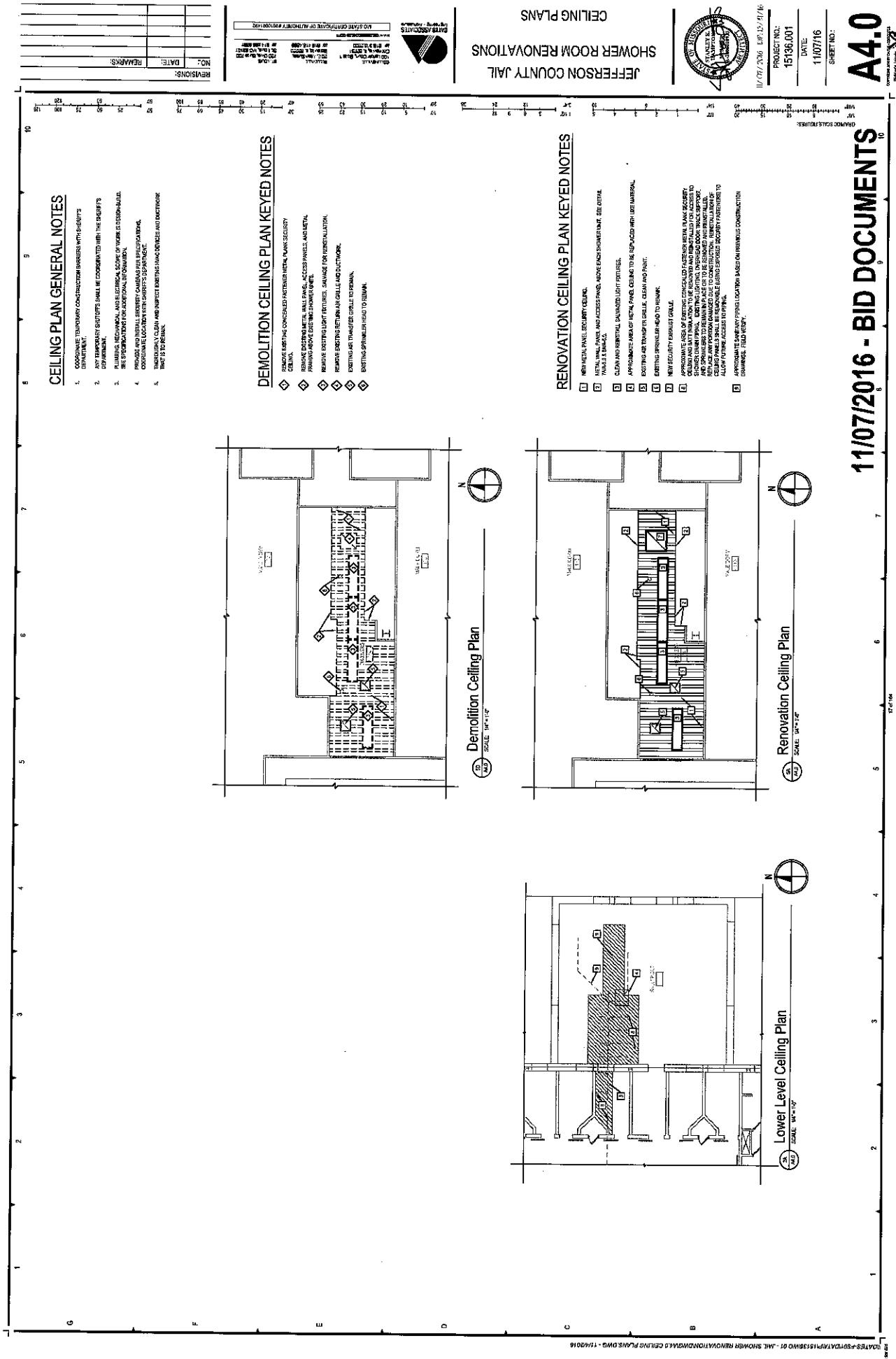
PROJECT NO.:	15136.001
DATE:	11/07/16
SHEET NO.:	
A2.0	
CONTINUATION SHEET NUMBER	
BLOCK 9 SHEET 15	

A2.0

1

1004

1000



11/07/2016 - BID DOCUMENTS A4.0

Jefferson County Jail Shower Room Renovations

Opinion of Probable Construction Cost - Summary

Division 01 - General Conditions	\$8,800
Division 02 - Existing Conditions	\$4,600
Division 03 - Concrete	\$1,150
Division 04 - Masonry	\$0
Division 05 - Metals	\$0
Division 06 - Wood and Plastics	\$0
Division 07 - Thermal and Moisture Protection	\$2,000
Division 08 - Openings	\$6,300
Division 09 - Finishes	\$19,300
Division 10 - Specialties	\$0
Division 11 - Equipment	\$0
Division 12 - Furnishings	\$0
Division 13 - Special Construction	\$0
Division 14 - Conveying Equipment	\$0
Division 21 - Fire Protection	\$0
Division 22 - Plumbing	\$40,000
Division 23 - Heating Ventilating and Air Conditioning	\$4,000
Division 26 - Electrical	\$1,000
Division 27 - Communications	\$0
Division 28 - Electronic Safety & Security	\$5,000
Division 31 - Earthwork	\$0
Division 32 - Exterior Improvements	\$0
Division 33 - Utilities	\$0
Subtotal	\$92,150
Design Contingency 10%	\$9,220
General Conditions 10%	\$10,140
Overhead and Profit 15%	\$16,730
Total	\$128,240

Jefferson County Jail Shower Room Renovations

	General	Fire Protection	Plumbing	HVAC	Electrical	Contractor Total
Subtotal	\$42,148		\$40,000	\$4,000	\$6,000	\$92,148
Design Contingency	5%	\$2,107		\$2,000	\$300	\$4,607
General Conditions	10%	\$4,426		\$4,200	\$630	\$9,676
Overhead and Profit	15%	\$7,302		\$6,930	\$1,040	\$15,985
TOTAL	\$55,983		\$53,130	\$5,313	\$7,970	\$122,396

Line Number	Description	Qty	Unit	Unit Price	Total
Division 01 - General Requirements					\$8,798.00
	Premium for security measures/logistics	1	ls	\$8,798.00	\$8,798.00
Division 02 - Existing Conditions					\$4,600.00
	Demo Sally Port Ceiling for piping access	200	sf	\$5.00	\$1,000.00
	Demo Exist. wall for temp access		ls	\$500.00	
	Remove existing door and frame	3	ls	\$200.00	\$600.00
	Temp relocate and reinstall kiosks	2	ea	\$500.00	\$1,000.00
	Misc. Demo	1	ls	\$2,000.00	\$2,000.00
Division 03 - Concrete					\$1,150.00
	Floor fill for slope in showers	115	sf	\$5.00	\$575.00
	Ramps in dorms	75	sf	\$5.00	\$375.00
	Curb at door	1	ls	\$200.00	\$200.00
Division 04 - Metals					
	Patch/replace wall at temp. opening		ls	\$500.00	
Division 05 - Thermal and Moisture Protection					\$2,000.00
	Membrane Waterproofing	200	sf	\$5.00	\$1,000.00
	Misc Sealants	1	ls	\$500.00	\$500.00
	Pipe Penetration Flashing/sealant	1	ls	\$500.00	\$500.00
Division 06 - Openings					\$6,300.00
	Temporary Doors & Hardware	1	ea	\$2,000.00	\$2,000.00
	New Door Thresholds	3	ea	\$100.00	\$300.00
	New Doors & Hardware	1	ea	\$2,000.00	\$2,000.00
	Prep ex. Frame, reinstall/modify ex. Doors	1	ls	\$2,000.00	\$2,000.00
Division 09 - Finishes					\$18,300.00
	Prep existing floor for new membrane waterproofing	190	sf	\$5.00	\$950.00
	Temporary Partitions	50	lf	\$45.00	\$2,250.00
	Epoxy resin floor finish	200	sf	\$17.00	\$3,400.00
	Painting Prep (exist. walls)	500	sf	\$2.50	\$1,250.00
	Painting	500	sf	\$2.00	\$1,000.00
	Patch existing dorm finishes	1	ls	\$1,000.00	\$1,000.00
	New ceiling in showers	115	sf	\$30.00	\$3,450.00
	Replace Sally Port ceiling	200	sf	\$30.00	\$6,000.00
Division 22 - Plumbing					\$40,000.00
	Plumbing	1	ls	\$40,000.00	\$40,000.00
Division 23 - HVAC					\$4,000.00
	New Exhaust Fan	1	ls	\$4,000.00	\$4,000.00
Division 26 - Electrical					\$1,000.00
	Remove & Replace Lighting	1	ls	\$500.00	\$500.00
	Electrical for new exhaust fan	1	ls	\$500.00	\$500.00
Division 28 - Electronic, Safety & Security					\$5,000.00
	Security Cameras	1	ls	\$5,000.00	\$5,000.00

SECTION 00 01 07 – PROFESSIONAL SEALS AND CERTIFICATIONS

1.1 DESIGN PROFESSIONALS OF RECORD

A. Architect:

1. Stan Hampton.
2. A-2006008933.
3. Responsible for Divisions 01-09 Sections except where indicated as prepared by other design professionals of record.



END OF DOCUMENT 00 01 07

11/07/2016 Exp. 12/31/2016

DOCUMENT 00 41 13 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

- A. Bidder: Boyer Bldg & Design, Inc
- B. Project Name: County Jail Shower Renovations.
- C. Owner: Jefferson County.
- D. Architect: Oates Associates, Inc.
- E. Architect Project Number: 15136.001.

1.2 CERTIFICATIONS AND BASE BID

A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Oates Associates, Inc., having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

***** Two Hundred Sixty One Thousand Four Hundred Ninety Nine Dollars (\$ 261 499 00)

1.3 SCHEDULE OF ALTERNATES

A. Alternate No. 1 - VDN-498V03-21S Cameras:

1. ADD X DEDUCT NO CHANGE NOT APPLICABLE .
2. Ten Thousand Eight Hundred and zero cents Dollars (\$ 10,800.00).
3. ADD 10 DEDUCT 0 calendar days to adjust the Contract Time for this alternate.

***** Bid amount is contingent on a pre-construction meeting between General Contractor, Sub-contractors and Architect- due to questions unknown

1.4 PROPOSED SCHEDULE OF VALUES

A. Provide a breakdown of the bid amount, in enough detail to facilitate continued evaluation of bid.

1. General Conditions:	\$ <u>28,299.00</u>
2. Demolition:	\$ <u>12,400.00</u>
3. Thermal and Moisture Protection:	\$ <u>5,800.00</u>
4. Doors and Hardware:	\$ <u>10,900.00</u>
5. Security Ceiling:	\$ <u>20,800.00</u>
6. Flooring:	\$ <u>16,000.00</u>
7. Painting:	\$ <u>3,400.00</u>
8. Plumbing:	\$ <u>150,800.00</u>
9. HVAC:	\$ <u>5,000.00</u>
10. Electrical:	\$ <u>8,100.00</u>
11. Video Surveillance:	\$ <u>10,800.00</u>

1.5 SUBCONTRACTORS AND SUPPLIERS

A. The following companies shall execute subcontracts for the portions of the Work indicated:

1. Doors and Hardware Work:	<u>EA Boyer Bldg & Design, Inc</u>
2. Security Ceiling Work:	<u>Acoustical Ceiling Specialists</u>
3. Flooring Work:	<u>Desco Coating</u>
4. Painting Work:	<u>Karl Painting</u>
5. Plumbing Work:	<u>Wm. Mahn Plumbing</u>
6. HVAC Work:	<u>Sheet Metal Contractors Inc</u>
7. Electrical Work:	<u>DeSoto Ozark Electric</u>
8. Video Surveillance Work:	<u>Tech Electronics</u>

1.6 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by County, and shall fully complete the Work within 120 calendar days.

1.7 ACKNOWLEDGEMENT OF ADDENDA

A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated Nov 29, 2016.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.
4. Addendum No. 4, dated _____.

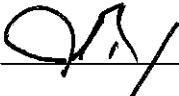
1.8 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in Jefferson County Missouri, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.9 SUBMISSION OF BID

A. Respectfully submitted this 6th day of December, 2016.

B. Submitted By Boyer Bldg & Design, Inc
(Name of bidding firm or corporation)

C. Authorized Signature: 
(Handwritten signature)

D. Signed By: Joshua Boyer
(Type or print name)

E. Title: President
(Owner/Partner/President/Vice President)

F. Street Address: 1701 Towne View Dr

G. City, State, Zip DeSoto, MO 63020

H. Phone: 636-337-9119

END OF DOCUMENT 00 41 13

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants.
5. Work restrictions.
6. Specification and drawing conventions.

1.2 PROJECT INFORMATION

A. Project Identification: Jefferson County Jail Shower Room Renovations.

1. Project Location: 510 1st Street, Hillsboro, MO 63050

B. Owner: Jefferson County Public Works Department.

1. Owner's Representative: Jason Jonas, 725 Maple Street, Hillsboro, Missouri 63050, (636) 797-5369

C. Architect: Oates Associates, Inc.

1. Architect's Representative: Stan Hampton, 720 Olive Street, Suite 700, St. Louis, MO 63101, (314) 588-8381-ext. 23.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Remove and replace existing shower units and associated piping. Remove and replace existing ceiling within the shower room. Provide new flooring and floor drains as indicated. Provide new door, frame and hardware indicate and patch existing wall. Provide new exhaust fan, ductwork and devices. Replace piping within toilet chase.
2. Mechanical, Plumbing and Electrical design shall be the responsibility of the Contractor. The Drawings and Specifications indicate the general intent for the MEP work and certain requirements. The design and engineering of the MEP work shall be performed by a licensed Engineer in the state of Missouri.

B. Type of Contract.

1. Project will be constructed under a single prime contract.

1.4 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 1. Driveways, Walkways and Entrances: Keep driveways, loading areas, entrances, corridors and stairs serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.5 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours Monday through Friday, unless otherwise indicated.

- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
- E. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.
- F. Restricted Substances: Use of tobacco products and other controlled substances within the existing building and on Project site is not permitted.
- G. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- H. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
 - 1. Maintain list of approved screened personnel with Owner's representative.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
 - 2. Refer to "General Conditions" and "Instructions to Bidders" for additional requirements.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
 - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
- h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
- j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within five business days of receipt of a request for substitution. Architect will notify Contractor through Owner's Representative of acceptance or rejection of proposed substitution within 15 business days of receipt of request, or ten business days of receipt of additional information or documentation, whichever is later.

- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
- b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.4 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.5 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.6 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 business days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect will consider requests for substitution if received within 20 business days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.

j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination drawings.
 - 2. Requests for Information (RFIs).
 - 3. Project meetings.
- B. Related Requirements:
 - 1. Section 01 73 00 "Execution" for procedures for coordinating general installation.

1.2 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.3 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Subcontract/trade.
 - 3. Brief description of work covered by subcontract.

1.4 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.

- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

1.5 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - 1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name.
 - 2. Project number.
 - 3. Date.
 - 4. Name of Contractor.
 - 5. Name of Architect.
 - 6. RFI number, numbered sequentially.
 - 7. RFI subject.
 - 8. Specification Section number and title and related paragraphs, as appropriate.
 - 9. Drawing number and detail references, as appropriate.
 - 10. Field dimensions and conditions, as appropriate.
 - 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 - 12. Contractor's signature.
 - 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow five working days for Architect's response for each RFI.
 - 1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.

- e. Requests for interpretation of Architect's actions on submittals.
- f. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 01 26 00 "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 5 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Software log with not less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within 5 days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

1.6 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 10 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned

parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:

- a. Tentative construction schedule.
- b. Phasing.
- c. Critical work sequencing and long-lead items.
- d. Designation of key personnel and their duties.
- e. Procedures for processing field decisions and Change Orders.
- f. Procedures for RFIs.
- g. Procedures for testing and inspecting.
- h. Procedures for processing Applications for Payment.
- i. Distribution of the Contract Documents.
- j. Submittal procedures.
- k. Preparation of record documents.
- l. Use of the premises and existing building.
- m. Work restrictions.
- n. Working hours.
- o. Owner's occupancy requirements.
- p. Responsibility for temporary facilities and controls.
- q. Procedures for moisture and mold control.
- r. Procedures for disruptions and shutdowns.
- s. Construction waste management and recycling.
- t. Parking availability.
- u. Office, work, and storage areas.
- v. Equipment deliveries and priorities.
- w. First aid.
- x. Security.
- y. Progress cleaning.

3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
- 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

- a. Contract Documents.
- b. Options.
- c. Related RFIs.
- d. Related Change Orders.
- e. Purchases.
- f. Deliveries.
- g. Submittals.
- h. Review of mockups.

- i. Possible conflicts.
- j. Compatibility problems.
- k. Time schedules.
- l. Weather limitations.
- m. Manufacturer's written instructions.
- n. Warranty requirements.
- o. Compatibility of materials.
- p. Acceptability of substrates.
- q. Temporary facilities and controls.
- r. Space and access limitations.
- s. Regulations of authorities having jurisdiction.
- t. Testing and inspecting requirements.
- u. Installation procedures.
- v. Coordination with other work.
- w. Required performance results.
- x. Protection of adjacent work.
- y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Conduct progress meetings at regular intervals.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.

- 4) Deliveries.
- 5) Off-site fabrication.
- 6) Access.
- 7) Site utilization.
- 8) Temporary facilities and controls.
- 9) Progress cleaning.
- 10) Quality and work standards.
- 11) Status of correction of deficient items.
- 12) Field observations.
- 13) Status of RFIs.
- 14) Status of proposal requests.
- 15) Pending changes.
- 16) Status of Change Orders.
- 17) Pending claims and disputes.
- 18) Documentation of information for payment requests.

3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. 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 resubmittals.

1. Initial Review: Allow 10 working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Resubmittal Review: Allow 10 working days for review of each resubmittal.

C. Paper Submittals: Place a permanent label or title block on each submittal item for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
3. Include the following information if applicable for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Name of subcontractor.
 - f. Name of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.

4. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return without review submittals received from sources other than Contractor.

D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single file incorporating submittal requirements of a single Specification Section, subcontractor or supplier.
2. Name file with submittal number or other unique identifier, including revision identifier.
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use electronic format of Contractor's standard transmittal form.

E. Options: Identify options requiring selection by Architect.

F. Deviations: Identify deviations from the Contract Documents on submittals.

G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.

3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

1.5 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements:

1. Submit electronic submittals via email as PDF electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
2. Action Submittals: Submit six paper copies of each submittal unless otherwise indicated. Architect will return three copies.
3. Informational Submittals: Submit three paper copies of each submittal unless otherwise indicated. Architect will not return copies.
4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

- a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
 - b. Six paper copies of Product Data unless otherwise indicated. Architect will return three copies.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).
3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
 - b. Six opaque copies of each submittal. Architect will retain three copies; remainder will be returned.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit three full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
 - 1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Submit product schedule in the following format:
 - a. PDF electronic file.
 - b. Six paper copies of product schedule or list unless otherwise indicated. Architect will return three copies.
- F. Miscellaneous Submittals: As required in individual Specification Sections, prepare written information, certificates, test reports, inspections, design data, etc. and submit three copies or electronic file to Architect.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: 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. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.

- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

SECTION 01 35 13.13 – SITE SECURITY AND HEALTH REQUIREMENTS

PART 1 - GENERAL

1.1 SUBMITTALS

A. List of required submittals:

1. Submit names, date of birth, and social security numbers for all personnel for security clearance checks.
2. Tuberculin skin test results.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL RULES OF THE INSTITUTION

- A. The Contractor shall arrange with Institution Officials to establish procedures for the controlled entry of workers and materials into the work areas.
- B. The Contractor shall establish regular working hours with the Institution Officials. Working hour changes or overtime are to be reported and approved (24) hours ahead of time. Emergency overtime is to be reported as soon as it is evident that overtime is needed. All work after dark must receive special approval.
- C. The Contractor shall provide name and phone number of the individual who is in charge onsite; who can be contacted in case of emergency. He must be able to furnish names and address of all employees upon request.
- D. The Contractor and employees shall cooperate with the Institution Officials in observing the following regulations:
 1. There shall be no fraternization with inmates.
 2. Contractors or employees shall not have any known relatives in the Institution.
 3. No intoxicating drinks shall be brought onto Institution Grounds.
 4. No firearms or other weapons shall be carried onto Institution Grounds.
 5. No prescription drugs above one day's prescription shall be carried on the premises.
 6. Any vehicle or individual will be subject to search at any time while on Institution Grounds.
 7. Contractor's or employees' vehicles shall be locked whenever unattended.
 8. All tools and equipment such as, but not limited to, ropes, ladders, cutting torches, files, hacksaws, etc., shall be tightly secured during non-working hours in the Contractors' storage trailer or assigned area.

9. The Institution will not be responsible for the Contractor's tools, equipment, or materials. The Contractor shall report any missing tools immediately.
10. Any interruption of utilities or roadways shall be approved at least (48) hours in advance.
11. Smoking is not permitted in County-operated buildings. Smoking on grounds shall be in accordance with the local Facility regulations.
12. Possession or use of smokeless tobacco or smokeless non-tobacco alternatives is strictly prohibited.

E. All workers shall be required to sign an acknowledgement of receipt of these rules.

3.2 SECURITY CLEARANCES AND RESTRICTIONS

- A. All construction personnel shall be identified to the Institution, and when the Institution feels it is necessary, they will be issued identification cards.
- B. Prior to the commencement of any onsite work, the Contractor shall submit a list containing the name, date of birth, and social security number of all construction personnel. The Contractor shall submit this information to the Institution for the purpose of obtaining security clearances. Any construction personnel with pending warrants or felony convictions within the last five (5) years shall not be allowed onsite.
- C. The Institution reserves the right to refuse admission to any individual they feel may be detrimental to the security of the Institution.

3.3 TOOL INVENTORY REQUIREMENTS

- A. Contractor shall be required to keep and maintain a current tool inventory. The tool inventory shall be made available upon request.

3.4 FIRE PROTECTION, SAFETY, AND HEALTH CONTROLS

- A. The Contractor shall be responsible and take all necessary precautions to guard against and eliminate possible fire hazards. Onsite burning is prohibited.
- B. Store all flammable or hazardous materials in proper container located outside the buildings or offsite, if possible.
- C. Provide and maintain in good order, during construction, all fire extinguishers as required by the National Fire Protection Association. In areas of flammable liquids, asphalt, or electrical hazards, extinguishers of the 15-pound carbon dioxide type or 20-pound dry chemical type shall be provided.
- D. Do not obstruct streets or walks without permission from the Construction Representative and Facility Representative.
- E. Construction personnel shall not exceed the Facility speed limit of 15mph unless posted otherwise.

- F. Take all necessary reasonable measures to reduce air and water pollution by any material or equipment use during construction. Keep volatile wastes in covered containers. Do not dispose of volatile wastes or oils in storm or sanitary drains.
- G. Keep project neat, orderly, and in a safe condition at all times. Immediately remove all hazardous waste. Do not allow rubbish to accumulate. Provide onsite containers for collection of rubbish and dispose of it at frequent intervals during progress of Work.

3.5 TUBERCULOSIS TESTING REQUIREMENTS

- A. All workers assigned to perform tasks, the duration of which will cause the worker to be in the confines of the correctional facility for more than ten (10) consecutive work days must provide proof of a negative tuberculin skin test. The test results must be no more than six (6) months old at the commencement of construction. Cost of the test must be born by the Contractor or the worker, not the Owner. If the construction contract period extends for more than twelve (12) months, all workers must be tested again on the anniversary of the contract commencement date.
- B. Any workers required to have a tuberculin skin test and who fails or refuses to do so will be denied admission to the Facility until such time as proof of the test results are provided.
- C. If any worker has a tuberculin skin test which has positive results, the worker shall be refused access to the Facility until the worker produces a certificate from a physician licensed to practice in the State of Missouri that the worker does not have infectious tuberculosis.
- D. The Contractor shall not be entitled to any additional time or compensation as a result of denial of access to any of its workforce as a result of the failure to produce negative tuberculin skin test results.
- E. The Contractor shall submit to the Facility current tuberculin skin test results of the Contractor's workforce who are required to have such a test in accordance with paragraph A above. Failure or refusal to maintain and produce the required records shall be a material breach of this contract, which shall subject the Contractor to a declaration of default in accordance with Article 7.2.

END OF SECTION 01 35 13.13

SECTION 01 35 13.16 - SPECIAL PROJECT PROCEDURES FOR DETENTION FACILITIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes special procedures for detention work.
- B. Detention work required by, but not specified in, this Section includes the following:
 - 1. Section 08 34 63 "Detention Doors and Frames."
 - 2. Section 08 71 63 "Detention Door Hardware."
 - 3. Section 09 57 53 "Security Ceiling Assemblies."

1.2 DETENTION WORK COORDINATION

- A. Coordinate detention work to ensure efficient and orderly installation and proper operation of each part of detention work.
- B. Coordinate selection of detention products and equipment and ensure compatibility.
- C. Coordinate installation of products furnished by Owner.
- D. Assemble and coordinate Shop Drawings, work submittals, and applicable coordination drawings. Submit all submittal items required for each Specification Section concurrently.
- E. Detention Work Subschedule: Coordinate sequencing and scheduling of detention work. Prepare a subschedule to Contractor's construction schedule for detention work.
- F. Coordinate installation of anchorages and embedments for detention work.
- G. Coordinate type of security fasteners for detention work.
- H. Coordinate temporary facilities and controls required by detention work.
- I. Coordinate, schedule, and approve interruptions of existing utilities related to maintaining existing levels of security.
- J. Coordinate protection of detention work.
- K. Coordinate preparation of Project Record Documents for detention work.
- L. Coordinate preparation of operation and maintenance manuals for detention work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of detention work.
 - 1. Examine roughing-in for embedded conduits and tubing and built-in anchors.
 - 2. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of detention work.
- B. Inspect built-in and cast-in anchors after installation but before connection to detention work. Prepare inspection reports.
- C. Verify locations of detention work with those indicated on coordination drawings.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FIELD QUALITY CONTROL

- A. Inspect installed detention work to verify compliance with requirements and that work is installed and connected according to the Contract Documents.
- B. Verify that wiring installation complies with manufacturer's submittal and written installation requirements in electrical, communications, and electronic safety and security Sections.
- C. Observe installation and startup checks of detention work according to manufacturer's written instructions.

3.3 DEMONSTRATION

- A. Train, or where indicated engage a factory-authorized service representative to train, Owner's personnel to adjust, operate, and maintain detention products and equipment.

END OF SECTION 01 35 13.16

SECTION 01 35 16 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes special procedures for alteration work.
- B. Related Sections:
 1. Section 01 50 00 "Temporary Facilities and Controls"
 2. Section 02 41 19 "Selective Demolition"

1.2 DEFINITIONS

- A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.
- B. Consolidate: To strengthen loose or deteriorated materials in place.
- C. Design Reference Sample: A sample that represents the Architect's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.
- D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.
- E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.
- F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.
- G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.
- H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.
- J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.
- K. Retain: To keep existing items that are not to be removed or dismantled.
- L. Strip: To remove existing finish down to base material unless otherwise indicated.

1.3 STORAGE AND HANDLING OF SALVAGED MATERIALS

- A. Salvaged Materials for Reinstallation:
 - 1. Repair and clean items for reuse as indicated.
 - 2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
 - 3. Protect items from damage during transport and storage.
 - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.
- B. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.
- C. Storage: Catalog and store items indoors or within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.
 - 1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
 - 2. Secure stored materials to protect from theft.
 - 3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 deg F (3 deg C) or more above the dew point.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.
 - 1. Use only proven protection methods, appropriate to each area and surface being protected.
 - 2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
 - 3. Erect temporary barriers to form and maintain fire-egress routes.
 - 4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
 - 5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
 - 6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
 - 7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.

8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.

B. Temporary Protection of Materials to Remain:

1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.

C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

D. Utility and Communications Services:

1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.

1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

3.2 PROTECTION FROM FIRE

A. General: Follow fire-prevention plan and the following:

1. Comply with NFPA 241 requirements unless otherwise indicated. Perform duties titled "Owner's Responsibility for Fire Protection."
2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.
 - a. If combustible material cannot be removed, provide fire blankets to cover such materials.

B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where

open flames or implements using high heat or combustible solvents and chemicals are anticipated:

1. Obtain Owner's approval for operations involving use of welding or other high-heat equipment. Use of open-flame equipment is not permitted. Notify Owner at least 72 hours before each occurrence, indicating location of such work.
2. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
6. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:
 - a. Train each fire watch in the proper operation of fire-control equipment and alarms.
 - b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
 - c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
 - d. Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work to detect hidden or smoldering fires and to ensure that proper fire prevention is maintained.
 - e. Maintain fire-watch personnel at Project site until 60 minutes after conclusion of daily work.

C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

D. Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to sprinklers, shield them temporarily with guards.

1. Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby work is complete.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

- A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.
- B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration

work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.

- C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.
- D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.
- E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

END OF SECTION 01 35 16

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.

1.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1.3 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 ACTION SUBMITTALS

- A. Delegated-Design Services Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.5 INFORMATIONAL SUBMITTALS

- A. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.6 **QUALITY ASSURANCE**

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.7 **QUALITY CONTROL**

- A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
 - 1. Engage a qualified testing agency to perform quality-control services.

2. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
3. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
4. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

B. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."

D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
 - 1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.
 - 2. Section 01 35 16 "Alteration Project Procedures" for special procedures for alteration work.

1.2 INFORMATIONAL SUBMITTALS

- A. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
 - 1. Locations of dust-control partitions at each phase of work.
 - 2. HVAC system isolation schematic drawing.
 - 3. Location of proposed air-filtration system discharge.
 - 4. Waste-handling procedures.
 - 5. Other dust-control measures.

PART 2 - PRODUCTS

2.1 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."
- B. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- C. Existing Elevator Use: Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.
 1. Do not load elevators beyond their rated weight capacity.
 2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.
- D. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
 - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- C. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- D. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- F. Temporary Partitions: Before Work begins, install a barrier with lockable entrance doors. Coordinate location indicated with existing conditions and with Owner to accommodate Owner's operations and construction operations. Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise. Install in a manner that will prevent occupants from entering the construction area, except by the entrance doors.
 - 1. Construct dustproof partitions with 2" x 4" wood studs at 24" maximum spacing covered with minimum 1/2" plywood sheathing on the occupant side of the framing. Securely laminate fiberglass reinforced panels to plywood. Fill joints with security sealant.
 - a. FRP Panels: ASTM 5319.
 - 1) Texture: Smooth.
 - 2) Flame-Spread Index: 25 or less.
 - 3) Smoke-Developed Index: 450 or less.
 - b. Security Sealant:
 - 1) Non-sag, tamper-resistant polyurethane by BASF, Pecora or Sika.
 - 2. Provide walk-off mats at each entrance through temporary partition.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 01 50 00

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Section 012500 "Substitution Procedures" for requests for substitutions.

1.2 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved by Architect through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.3 ACTION SUBMITTALS

- A. Comparable Product Request Submittal: Submit request for consideration of each comparable product. Identify basis-of-design product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within five business days of receipt of a comparable product request. Architect will notify Contractor through Owner's Representative of approval or rejection of proposed comparable product request within 15 business days of receipt of request, or 10 business days of receipt of additional information or documentation, whichever is later.
 - a. Form of Architect's Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.4 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:

1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - a. Sole product may be indicated by the phrase: "Subject to compliance with requirements, provide the following: ..."
2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - a. Sole manufacturer/source may be indicated by the phrase: "Subject to compliance with requirements, provide products by the following: ..."
3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
 - a. Limited list of products may be indicated by the phrase: "Subject to compliance with requirements, provide one of the following: ..."
4. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, which complies with requirements.
 - a. Non-limited list of products is indicated by the phrase: "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following: ..."
5. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
 - a. Limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, provide products by one of the following: ..."
6. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, which complies with requirements.
 - a. Non-limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following: ..."
7. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics

that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

- a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
 2. Evidence that proposed product provides specified warranty.
 3. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 73 00 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 01 10 00 "Summary" for limits on use of Project site.
 - 2. Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 - 3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control

of Contractor, submit a request for information to Architect according to requirements in Section 01 31 00 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.

3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.

5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.6 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Comply with qualification requirements in Section 01 40 00 "Quality Requirements"

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 01 73 00

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 2. Section 01 78 39 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.2 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.5 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 working days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals and similar final record information.
 - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section.
 - 5. Submit test/adjust/balance records.
 - 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 working days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 3. Complete startup and testing of systems and equipment.
 - 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 - 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 01 79 00 "Demonstration and Training."
 - 6. Advise Owner of changeover in heat and other utilities.
 - 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 8. Complete final cleaning requirements, including touchup painting.
 - 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 5 working days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.6 FINAL COMPLETION PROCEDURES

A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 01 29 00 "Payment Procedures."
2. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
3. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1.8 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - c. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - d. Sweep concrete floors broom clean in unoccupied spaces.
 - e. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - f. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials.

Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.

- g. Remove labels that are not permanent.
- h. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- i. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- j. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
- k. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
- l. Leave Project clean and ready for occupancy.

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 - 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 01 77 00

SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Operation manuals for systems, subsystems, and equipment.
3. Product maintenance manuals.
4. Systems and equipment maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operations and maintenance manuals in each of the following formats:

1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
2. Three paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two copies.

C. Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.

1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 REQUIREMENTS FOR OPERATION, AND MAINTENANCE MANUALS

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.
- B. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- C. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name and contact information for Contractor.
 - 6. Name and contact information for Architect.
 - 7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 - 8. Cross-reference to related systems in other operation and maintenance manuals.
- D. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- E. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- F. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
 - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

G. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
2. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 2. Performance and design criteria if Contractor is delegated design responsibility.
 3. Operating standards.
 4. Operating procedures.
 5. Operating logs.
 6. Wiring diagrams.
 7. Control diagrams.
 8. Piped system diagrams.
 9. Precautions against improper use.
 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
 1. Product name and model number. Use designations for products indicated on Contract Documents.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.3 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 1. Standard maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
 1. Do not use original project record documents as part of operation and maintenance manuals.
- E. Comply with Section 01 77 00 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
- B. Related Requirements:
 - 1. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set(s) of marked-up record prints.
- B. Record Specifications: Submit one paper copy of Project's Specifications, including addenda and contract modifications.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised Drawings as modifications are issued.
 - 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it.
 - c. Record and check the markup before enclosing concealed installations.
 - 2. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.

3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. Note related Change Orders and record Drawings where applicable.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 01 78 39

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Salvage of existing items to be reused or recycled.

1.2 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.3 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. Hazardous materials will be removed by Owner before start of the Work.
 - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.
- G. Arrange selective demolition schedule so as not to interfere with Owner's operations.

1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.

- d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
- e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
- f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
- g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- C. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 - 4. Maintain fire watch during and for at least four hours after flame-cutting operations.
 - 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 6. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
 1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Immersible joint sealants.

1.2 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.

1.3 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

- A. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 IMMERSIBLE JOINT SEALANTS

- A. Immersible Joint Sealants. Suitable for immersion in liquids; ASTM C 1247; tested in deionized water unless otherwise indicated
- B. Urethane, Immersible, S, NS, 25, T, NT, I: Immersible, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Uses T, NT, and I.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. BASF Corporation; Construction Systems.
- b. Sika Corporation; Joint Sealants.
- c. Tremco Incorporated.

2.3 JOINT-SEALANT BACKING

- A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 1. Remove laitance and form-release agents from concrete.
 2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces.

3.2 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with ASTM C 1193 and joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 1. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.

END OF SECTION 07 92 00

SECTION 08 34 63 - DETENTION DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes detention doors and frames.
- B. Related Requirements:
 - 1. Section 013513.16 "Special Project Procedures for Detention Facilities" for general requirements for detention facilities.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: In addition to plans, elevations, sections, and attachment details, provide a schedule using same reference numbers for details and openings as those on Drawings.

1.3 INFORMATIONAL SUBMITTALS

- A. Product test reports.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Tools: Provide two sets of tools for installing and removing security fasteners.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver detention hollow-metal work palletized, packaged, or crated. Do not use nonvented plastic.
- B. Deliver welded detention frames with two removable spreader bars across bottom of frames.
- C. Store detention hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch- (102-mm-) high wood blocking. Provide minimum 1/4-inch (6.3-mm) space between each stacked door.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Ceco Door; ASSA ABLOY.
 2. Habersham Metal Products Company.
 3. Sweeper Metal Fabricators Corp.
 4. Trussbilt.
- B. Source Limitations: Obtain detention doors and frames from single source from single manufacturer.

2.2 DETENTION DOOR AND FRAME ASSEMBLIES

- A. Detention Door and Frame Assemblies: ASTM F 1450 for security grades specified.
- B. Detention Frames: Comply with ASTM F 1592 and removable stop test according to NAAMM-HMMA 863.

2.3 DETENTION DOORS

- A. General: Provide flush-design detention doors of seamless hollow construction, 2 inches (51 mm) thick. Construct detention doors with smooth, flush surfaces without visible joints or seams on exposed faces or stile edges.
- B. Core Construction: Provide the following core construction of same material as detention door face sheets, welded to both detention door faces:
 1. Steel-Stiffened Core: 0.042-inch- (1.0-mm-) thick, steel vertical stiffeners extending full-door height, with vertical webs spaced not more than 4 inches (102 mm) apart, spot welded to face sheets a maximum of 3 inches (76 mm) o.c. Fill spaces between stiffeners with insulation.
- C. Vertical Edge Channels: 0.123-inch- (3.1-mm-) thick, continuous channel of same material as detention door face sheets, extending full-door height at each vertical edge; welded to top and bottom channels to create a fully welded perimeter channel.
- D. Top and Bottom Channels: 0.123-inch- (3.1-mm-) thick metal channel of same material as detention door face sheets, spot welded, not more than 4 inches (102 mm) o.c., to face sheets.
 1. Reinforce top edge of detention door with 0.053-inch- (1.3-mm-) thick closing channel, welded so channel web is flush with top door edges.
- E. Hardware Reinforcement: Fabricate reinforcing plates from same material as detention door face sheets to comply with the following minimum thicknesses:

1. Full-Mortise Hinges and Pivots: 0.187 inch (4.7 mm) thick.
2. Maximum-Security Surface Hinges: 0.250 inch (6.3 mm) thick.
3. Strike Reinforcements: 0.187 inch (4.7 mm) thick.
4. Slide-Device Hanger Attachments: As recommended by device manufacturer.
5. Lock Fronts, Concealed Holders, and Surface-Mounted Closers: 0.093 inch (2.3 mm) thick.
6. All Other Surface-Mounted Hardware: 0.093 inch (2.3 mm) thick.
7. Lock Pockets: 0.123 inch (3.1 mm) thick at non-inmate side, welded to face sheet.

F. Hardware Enclosures: Provide enclosures and junction boxes for electrically operated detention door hardware of same material as detention door face sheets, interconnected with UL-approved, 1/2-inch- (12.7-mm-) diameter conduit and connectors.

1. Access Plates: Where indicated for wiring installation, provide access plates to junction boxes, fabricated from same material and thickness as face sheet and fastened with at least four security fasteners spaced not more than 6 inches (152 mm) o.c.

G. Interior Detention Doors: Construct interior doors to comply with NAAMM-HMMA 863 and as specified.

1. Security Grade 3: Provide doors with face sheets of 0.067-inch- (1.7-mm-) minimum-thickness, metallic-coated, cold-rolled, steel.

2.4 DETENTION FRAMES

A. General: Provide fully welded detention frames with integral stops, of seamless construction without visible joints or seams. Fabricate detention frames continuously welded full depth and width of detention frame.

B. Stop Height: Provide minimum stop height of 0.625 inch (16 mm) for detention door openings and minimum stop height of 1-1/4 inches (32 mm) in security glazing or detention panel openings.

C. Exterior Detention Frames: Construct exterior frames to comply with NAAMM-HMMA 863 and as specified.

1. Security Grade 3: Provide frames fabricated from 0.067-inch- (1.7-mm-) minimum-thickness, metallic-coated, cold-rolled steel.

D. Hardware Reinforcement: Fabricate reinforcing plates from same material as detention frame to comply with the following minimum thicknesses:

1. Hinges and Pivots: 0.187 inch (4.7 mm) thick by 1-1/2 inches (38 mm) wide by 10 inches (254 mm) long.
2. Strikes and Closers: 0.187 inch (4.7 mm) thick.
3. Surface-Mounted Hardware: 0.093 inch (2.3 mm) thick.
4. Lock Pockets: 0.123 inch (3.1 mm) thick at non-inmate side, welded to face sheet. Provide 0.123-inch- (3.1-mm-) thick, lock protection plate for attachment to lock pocket with security fasteners.

E. Jamb Anchors: Weld jamb anchors to detention frames near hinges and directly opposite on strike jamb or as required to secure detention frames to adjacent construction.

1. Number of Anchors: Provide two anchors per jamb plus the following:
 - a. Detention Door Frames: One additional anchor for each 18 inches (457 mm), or fraction thereof, above 54 inches (1372 mm) in height.
 - b. Detention Frames with Security Glazing or Detention Panels: One additional anchor for each 18 inches (457 mm), or fraction thereof, above 36 inches (914 mm) in height.

F. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, formed of same material and thickness as detention frame.

G. Rubber Door Silencers: Except on weather-stripped detention doors, drill stops in strike jambs to receive three silencers on single-detention-door frames and drill head jamb stop to receive two silencers on double-detention-door frames. Keep holes clear during construction.

H. Grout Guards: Provide factory-installed grout guards of same material as detention frame, welded to detention frame at back of hardware cutouts, silencers, and glazing-stop screw preparations to close off interior of openings and prevent mortar or other materials from obstructing hardware operation or installation.

2.5 MATERIALS

- A. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, CS (Commercial Steel), Type B.
- B. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, CS (Commercial Steel), Type B.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, CS (Commercial Steel), Type B; with G60 (Z180) zinc (galvanized) or A60 (ZF180) zinc-iron-alloy (galvannealed) coating designation.
- D. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- E. Concealed Bolts: ASTM A 307, Grade A.
- F. Masonry Anchors: Same steel sheet as door face.
- G. Embedded Anchors: Hot-dip galvanized according to ASTM A 153/A 153M.
- H. Post-Installed Anchors: Torque-controlled expansion anchors.
- I. Welding Rods and Bare Electrodes: According to AWS specifications for metal alloy welded.
- J. Grout: Comply with ASTM C 476, with a slump of not more than 4 inches (102 mm) as measured according to ASTM C 143/C 143M.
- K. Insulation: Slag-wool-fiber/rock-wool-fiber or glass-fiber blanket insulation.
- L. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) dry film thickness per coat.

2.6 FABRICATION

- A. Fabricate detention doors and frames rigid, neat in appearance, and free of defects, warp, or buckle.
- B. Tolerances: Comply with NAAMM-HMMA 863.
- C. Exterior Detention Doors: Provide weep-hole openings in bottoms of detention doors to permit entrapped moisture to escape. Seal joints in top edges of detention doors against water penetration.
- D. Hardware Preparation: Factory prepare detention doors and frames to receive mortised hardware, including cutouts, reinforcement, mortising, drilling, and tapping, according to final Door Hardware Schedule and templates provided by detention door hardware supplier.
- E. Factory cut openings in detention doors.
- F. Weld components to comply with referenced AWS standard. Weld before finishing components to greatest extent possible. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

2.7 FINISHES

- A. Factory Priming for Field-Painted Finish: Apply shop primer immediately after surface preparation and pretreatment. Apply a smooth coat of even consistency to provide a uniform dry film thickness of not less than 0.7 mil (0.02 mm).
 - 1. Shop Primer: Manufacturer's or fabricator's standard, fast-curing, corrosion-inhibiting, lead- and chromate-free, universal primer complying with SDI A250.10.

2.8 SECURITY FASTENERS

- A. Operable only by tools produced by fastener manufacturer or other licensed fabricator for use on specific fastener type.
 - 1. Drive-System Type: Pinned Torx.

2.9 SEALANTS

- A. Security Sealants: Manufacturer's standard, nonsag, tamper-resistant polyurethane sealant.

2.10 ACCESSORIES

- A. Concealed Bolts: ASTM A 307, Grade A unless otherwise indicated.
- B. Embedded Plate Anchors: Mild steel shapes and plates, minimum 3/16 inch (4.8 mm) thick; with minimum 1/2-inch- (12.7-mm-) diameter, headed studs welded to back of plate.

C. Welding Rods and Bare Electrodes: According to AWS specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations of detention frame connections before detention frame installation.

3.2 PREPARATION

- A. Before installation and with shipping spreaders removed, adjust detention frames for squareness, alignment, twist, and plumbness to the following tolerances:
 1. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb and perpendicular to frame head.
 2. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of face.
 3. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of door rabbet.
 4. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a perpendicular line from head to floor.

3.3 INSTALLATION

- A. Anchorage: Set detention frame anchorage devices according to details on Shop Drawings and according to anchorage device manufacturer's written instructions.
- B. Where detention frames are fabricated in sections due to shipping limitations, assemble frames and install angle splices at each corner, of same material and thickness as detention frame, and extend at least 4 inches (102 mm) on both sides of joint.
 1. Field splice only at approved locations. Weld, grind, and finish as required to conceal evidence of splicing on exposed faces.
 2. Continuously weld and finish smooth joints between faces of abutted, multiple-opening, detention frame members.
- C. Apply bituminous coating to backs of frames before filling with grout.
- D. Placing Detention Frames: Install detention frames of sizes and profiles indicated. Set detention frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.

- E. Grout: Fully grout detention frame jambs and heads. Completely fill space between frames and adjacent substrates. Hand trowel grout and take other precautions, including bracing detention frames, to ensure that frames are not deformed or damaged by grout forces.
- F. Security Sealant: Apply polyurethane security sealant at all exposed gaps between detention frames and adjacent substrates.
- G. Swinging Detention Doors: Fit non-fire-rated detention doors accurately in their frames, with the clearances according to NAAMM-HMMA 863.
- H. Sliding Detention Doors: Fit sliding detention doors in their frames according to manufacturer's written instructions and as required to allow doors to slide without binding.
- I. Fire-Rated Detention Doors: Install with clearances as specified in NFPA 80.
- J. Smoke-Control Detention Doors: Install according to NFPA 105.
- K. Installation Tolerances: Comply with NAAMM-HMMA 863.
- L. Glazing: Comply with installation requirements in Section 088853 "Security Glazing" unless otherwise indicated.

3.4 FIELD QUALITY CONTROL

- A. Inspect installed products to verify compliance with requirements. Prepare inspection reports and indicate compliance with and deviations from the Contract Documents.

3.5 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including detention doors and frames that are warped, bowed, or otherwise unacceptable.

END OF SECTION 08 34 63

SECTION 08 71 63 - DETENTION DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes detention door hardware.

1.2 COORDINATION

- A. Templates: Obtain and distribute, to the parties involved, templates for detention doors, frames, and other work specified to be factory prepared for installing detention door hardware.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of detention door hardware. Include plans, elevations, sections, and attachment details.
- C. Detention Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware as well as installation procedures and wiring diagrams. Coordinate the Detention Door Hardware Schedule with detention doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of detention door hardware.

1.4 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Sample Warranties: For special warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of detention door hardware.

1.7 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of detention door hardware that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Structural failures including excessive deflection, cracking, or breakage.
 - b. Faulty operation of operators and detention door hardware.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering or detention use.
2. Warranty Period: Three years from date of Substantial Completion.
3. Warranty Period for Security Door Closers: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Swinging Detention Door Assemblies: Provide detention door hardware as part of a detention door assembly that complies with security grade indicated, when tested according to ASTM F 1450, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.

2.2 DETENTION DOOR HARDWARE, GENERAL

A. Regulatory Requirements:

1. Comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC A117.1.

2.3 INSTITUTIONAL HINGES

A. Institutional Hinges: Heavy weight; fabricated from steel; with two concealed maintenance-free ball bearings; nonremovable hinge pins; welded hospital tips; full mortise; drilled to BHMA A156.7 template dimensions for countersunk security fasteners; BHMA A156.1, Grade 1.

1. Base Metal: Cast stainless steel unless otherwise required for fire rating.
2. Hinge Pin: Stainless steel.
3. Reverse Safety Stud: Metal stud extension on back of each leaf that engages hole in reinforcing plate.
4. Size: As required by door size.
5. Finish: BHMA 630.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Hager Companies.
2. McKinney Products Company, an ASSA ABLOY Group company.
3. Southern Folger Detention Equipment Company.

2.4 MECHANICAL DETENTION LOCKS AND LATCHES

A. Lock Mountings:

1. Hollow-Metal Detention Doors: Mount detention lock to back of 0.183-inch (4.65-mm) nominal-thickness, galvanized-steel cover plate for installation in lock pocket fabricated into detention door. Attach cover plate to hollow-metal detention door with security fasteners.

B. Mechanical Deadlocks, Paracentric Cylinder:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Airteq Systems.
 - b. Brink, R. R. Locking Systems, Inc.
 - c. Southern Folger Detention Equipment Company.
2. Function: Deadlocked in both locked and unlocked position; latchbolt retracted and extended by six-tumbler paracentric cylinder; keyed two sides.
3. Latchbolt: 2-inch-high by 3/4-inch- (51-mm-high by 19-mm-) thick steel, with two case-hardened-steel insert pins; 3/4-inch (19-mm) throw; 1/2-inch (13-mm) bolt projection when retracted.
4. Security Grade: 1 according to ASTM F 1450 or ASTM F 1577.

2.5 DETENTION LOCK TRIM

A. Escutcheons for Paracentric Locks: 0.125-inch- (3.18-mm-) thick, 3-inch- (75-mm-) diameter stainless steel with BHMA 630 finish. Attach with security fasteners.

1. Style: Double wing.

2.6 DETENTION CYLINDERS AND KEYING

A. Source Limitations: Subject to compliance with requirements, provide cylinders and keying for paracentric and mogul cylinders by same manufacturer as for detention locks and latches.

B. Paracentric Cylinders: Manufacturer's standard lever-tumbler type, constructed from one-piece spring-tempered brass; with tumblers activated by phosphor bronze springs; five tumblers per lock.

- C. Keying System: Provide a factory-registered keying system complying with the following requirements:
 - 1. Paracentric cylinders operated by change keys only.
- D. Keys: Provide cast silicon-bronze copper alloy keys complying with the following:
 - 1. Stamping: Permanently inscribe each key with a visual key-control number and include the following notation:
 - a. Information to be furnished by Owner.
 - 2. Quantity: In addition to one extra blank key for each lock, provide the following:
 - a. Cylinder Change Keys: Three.

2.7 DETENTION OPERATING TRIM

- A. Standard: BHMA A156.6, Grade 1.
- B. Surface-Mounted Door Pulls: 8-3/4-inch (222-mm) overall length and 2-1/4-inch (57-mm) projection; attach to door with two security fasteners.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Airtek Systems.
 - b. Brink, R. R. Locking Systems, Inc.
 - c. Southern Folger Detention Equipment Company.
 - 2. Material: Cast stainless steel with BHMA 630 finish.

2.8 THRESHOLDS

- A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. National Guard Products, Inc.
 - b. Pemko Manufacturing Co.
 - c. Zero International, Inc.

2.9 FABRICATION

- A. Base Metals: Produce detention door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified detention door hardware units and BHMA A156.18 finishes.

B. Fasteners: Provide flat-head security fasteners with finished heads to match surface of detention door hardware.

1. Security Fasteners: Fabricate detention door hardware using security fasteners with head style appropriate for fabrication requirements, strength, and finish of adjacent materials. Provide stainless-steel security fasteners in stainless-steel materials.
2. Concealed Fasteners: For detention door hardware units that are exposed when detention door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching detention door hardware. Where using through bolts on hollow-metal detention door and frame construction, provide sleeves for each through bolt.

2.10 HARDWARE FINISHES

A. Standard: Comply with BHMA A156.18.

2.11 SECURITY FASTENERS

A. Operable only by tools produced by fastener manufacturer or other licensed fabricator for use on specific fastener type.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine detention doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations of detention door hardware connections before detention door hardware installation.
- C. Inspect built-in and cast-in anchor installations, before installing detention door hardware, to verify that anchor installations comply with requirements. Prepare inspection reports.
- D. Examine roughing-in for electrical power systems to verify actual locations of connections before detention door hardware installation.

3.2 PREPARATION

A. Steel Detention Doors and Frames: Comply with BHMA A156.115 Series.

1. Surface-Applied Detention Door Hardware: Drill and tap detention doors and frames according to SDI A250.6.

3.3 INSTALLATION

- A. Mounting Heights: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
- B. Where cutting and fitting are required to install detention door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.
 - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Install interconnecting wiring and connectors between detention door hardware devices. Terminate device wiring for detention door hardware installed in swinging doors at a plug-type connector located in lock pocket or door frame junction box.
- D. Security Fasteners: Install detention door hardware using security fasteners with head style appropriate for installation requirements, strength, and finish of adjacent materials.
- E. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 07 92 00 "Joint Sealants."

3.4 DETENTION DOOR HARDWARE SCHEDULE

- A. General: Provide detention door hardware for each detention door to comply with requirements in this Section and with detention door hardware sets.

Door Hardware Set No. 1

Single Door No. 114; to have the following:

<u>Qty.</u>	<u>Item</u>	<u>Manuf.</u>	<u>Model</u>	<u>Finish</u>
1 1/2 pr.	Institutional Hinges	HAG	IHTAB850	630
		McK	HTB386	630
		SF	204FMSS	630
1	Deadlock	AS	5066-K2	Galv
		BLS	7076	Galv
		SF	1070A-2	Galv
1	Institutional Pull	AS	612	US32D
		BLS	300021	US26D
		SF	212C	US32D
1	Threshold	NGP	424	MIL
		PEM	170	MIL
		ZER	654	MIL

Provide deadlock manufacturer's trim, strike and other items necessary for a complete, fully-functional door.

Door Hardware Set No. 2

Single Door No. 112 & 115; each to have the following:

<u>Qty.</u>	<u>Item</u>	<u>Manuf.</u>	<u>Model</u>	<u>Finish</u>
1	Threshold	NGP	950V	MIL
		PEM	2001AV	MIL
		ZER	566A	MIL

Remainder of hardware is existing, reconnect as required. Immediately bring to Architect's attention any existing hardware that requires replacement.

END OF SECTION 08 71 63

SECTION 09 57 53 - SECURITY CEILING ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Security-plank security ceiling assemblies.
- B. Related Requirements:
 - 1. Section 01 35 13.16 "Special Project Procedures for Detention Facilities" for additional requirements for detention facilities.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Seismic Standard: Provide ceilings designed and installed to withstand the effects of earthquake motions according to ASCE/SEI 7.

2.2 SECURITY-PLANK SECURITY CEILING ASSEMBLY

- A. Single-Configuration Panels: Fabricated from a single sheet of metal, with a self-locking male/female lap joint for joining panels.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Gordon, Inc.
 - b. Rockfon (Roxul Inc.)
 - c. Steel Ceilings Inc.
 - d. Trussbilt.
 - 2. Steel Panels: Metallic-coated steel with minimum uncoated sheet thickness of 0.053 inch.
 - 3. Panel Width: 12 inches.
 - 4. Panel Length: Custom lengths to fit areas indicated.
 - 5. Perforation Pattern: Unperforated.

- B. Closures: Fabricated from minimum 0.053-inch-thick steel sheet, finished to match security ceiling panels. Fasten with security fasteners or by welding.
- C. Suspension System: Heavy-duty exposed system consisting of intermediate carriers supported by secondary support system attached to building structure.
 - 1. Intermediate Carriers: Formed from tees with a nominal 4-inch-wide exposed face or built up from back-to-back angles or channels each with a nominal 2-inch-wide exposed face; fabricated from 0.053-inch-thick, cold-rolled steel sheet.
 - a. Finish: Match security ceiling panels.
 - 2. Secondary Support System:
 - a. Hanger Rods: Mild steel, zinc coated or protected with rust-inhibitive paint.
 - b. Angle Hangers: 1-1/2-by-1-1/2-inch galvanized-steel angles, G90 zinc coating, bolted to intermediate carriers and building structure.
- D. Perimeter Supports: Wall-mounted angles, tees, and bearing plates; fabricated from minimum 0.068-inch-thick, cold-rolled steel sheet; finished to match security ceiling panels.
- E. Exposed Edge Moldings and Trim: Provide exposed members as indicated or required for edges of security ceiling, fixture trim, beams, fasciae at changes in security ceiling height, and other conditions, of metal and finish matching security ceiling panels.

2.3 STEEL FINISHES

- A. Baked-Enamel or Powder-Coat Finish: After cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils.
 - 1. Color and Gloss: Manufacturer's standard white.

2.4 SECURITY FASTENERS

- A. Operable only by tools produced by fastener manufacturer or other licensed fabricator for use on specific type of fastener.

2.5 SEALANTS

- A. Polyurethane Security Sealants: Manufacturer's standard, nonsag, tamper-resistant sealant for joints with low movement.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. BASF Corporation: Construction Systems.
 - b. Pecora Corporation.

c. Sika Corporation; Joint Sealants.

2.6 ACCESSORIES

- A. Concealed Bolts: ASTM A 307, Grade A unless otherwise indicated.
- B. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welding.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements.
- B. Inspect built-in and cast-in anchor installations before installing security ceiling assemblies to verify that anchor installations comply with requirements.

3.2 GENERAL INSTALLATION

- A. Comply with CISCA's "Ceiling Systems Handbook" for installation of security ceiling assemblies.
- B. Install perimeter supports around perimeter of security ceiling area.
 1. Sealant: Apply polyurethane security sealant in a continuous ribbon concealed on back of vertical legs of supports before they are installed.
 2. Attach supports with anchor bolts or expansion anchors spaced not more than 12 inches o.c. and not more than 3 inches from ends. Miter corners accurately.
 - a. Level perimeter supports with suspension system to a tolerance of 1/8 inch in 12 feet.
 3. Do not use exposed fasteners, including pop rivets, on moldings and trim. If exposed fasteners are unavoidable, obtain approval from Architect for their use and use security fasteners.
- C. Seismic Installation: Comply with seismic standard indicated, manufacturer's written instructions, and CISCA's "Ceiling Systems Handbook."

3.3 SECURITY-PLANK SECURITY CEILING ASSEMBLY INSTALLATION

- A. Install security planks with long edges continuously interlocked. Adjust security planks to final position before permanently fastening. Provide minimum 1-1/2-inch end bearing.

1. Attach adjacent security planks to each other with security fasteners spaced not more than 12 inches o.c. and not more than 6 inches from ends.
2. Continuously weld ends of security planks to perimeter supports. Remove exposed projecting burrs, edges, and rough spots resulting from welding operations by grinding smooth.
3. Attach ends of security planks to perimeter supports with security fasteners not more than 3 inches from edges of security plank. Fasten through exposed face of supports into security planks.
4. Provide intermediate carriers for ends of security planks that are not supported by perimeter supports. To attach security planks to intermediate carriers, use same method as that used for attaching security planks to perimeter supports.
 - a. Support intermediate carriers from structure above by secondary support system spaced at 48 inches o.c. and bolted to carriers.

B. Access Panels: Install each access panel only where indicated and within one security plank.

C. Provide steel angle reinforcement on each side of openings that exceed 12 inches in any direction.

END OF SECTION 09 57 53

SECTION 09 67 23 - RESINOUS FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes resinous flooring systems.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each type of exposed finish required.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1.5 FIELD CONDITIONS

- A. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring application.
- B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.
- C. Close spaces to traffic during resinous flooring application and for 24 hours after application unless manufacturer recommends a longer period.

PART 2 - PRODUCTS

2.1 RESINOUS FLOORING

- A. Resinous Flooring System: Abrasion-, impact-, and chemical-resistant, aggregate-filled, and resin-based monolithic floor surfacing designed to produce a seamless floor.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. BASF Corporation; Construction Systems.
- b. Crossfield Products Corp.
- c. Duraflex, Inc.
- d. Sika Corporation; Flooring.
- e. Stonhard, Inc.
- f. Tnemec Inc.

B. System Characteristics:

1. Color and Pattern: As selected by Architect from manufacturer's full range.
2. Wearing Surface: Textured for slip resistance.
3. Overall System Thickness: 3/16 inch.

C. Waterproof Membrane: ANSI 118.10 Recommended by resinous flooring manufacturer with the following properties:

1. Thickness, minimum	40 mil.
2. Waterproofness	No Passage of Water
Resistance to passage when Subject to 27.7" head of water (Hydrostatic pressure of 1 lb./ft.) for one month.	
3. Elongation ASTM D638	580%
4. Tensile Strength ASTM D638	345 psi
5. Adhesion in Peel to Concrete ASTM C794 (pounds per inch width)	8.3 lbs
6. Moisture Vapor Transmission ASTM E96	2.04 gr
7. Crack-Bridging ASTM C836, 1/8" opening	no rupture
8. Hydrostatic Resistance ASTM D751	Passes Procedure
9. Permeability ASTM E96	0.013 perm/in
10. Antimicrobial Resistance ASTM G21	Passes Rating 2

D. Reinforcing Membrane: Flexible resin formulation that is recommended by resinous flooring manufacturer.

1. Provide fiberglass scrim embedded in reinforcing membrane.

E. Patching and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended by manufacturer for application indicated.

1. Compressive Strength ASTM C109 (2" x 2" cubes)	2,440 psi
2. Tensile Strength & Elongation ASTM C190	430 psi
3. Flammable Properties ASTM E84 (Steiner tunnel Test)	Flame Spread 4 Smoke Density 0
4. Fire Resistance UL-790, Class A	Complies
5. Salt Spray (Fog) ASTM B117 (1000 hrs. exposure)	No visible degradation

6.	Resistance to Wind-Driven Rain Fed. Spec. TT-C-558 (8 hrs.) and TT-P-0035** (24 hrs.) At 5" water pressure and 60 gal. /hr. water flow, no water or dampness noted on back of test panels.	
7.	Impact Resistance MIL-D-3134	Complies
8.	Flexural Strength ASTM C580 (Modulus of Rupture)	195 psi
9.	Water Vapor Transmission ASTM E96 (Procedure A)	1,958 perms/inch
10.	Freeze/Thaw ASTM C67 B) weight loss after 60 cycles from -500F to 800F.	No defects or weight (Method

F. Body Coats:

1. Resin: Epoxy.
2. Formulation Description: 100 percent solids.
3. Application Method: Self-leveling slurry with broadcast aggregates.
4. Number of Coats: Two.
5. Aggregates: Manufacturer's standard.

G. Topcoats: Sealing or finish coats.

1. Resin: Epoxy.
2. Formulation Description: 100 percent solids.
3. Finish: Matte.

H. System Physical Properties: Provide resinous flooring system with the following minimum physical property requirements when tested according to test methods indicated:

1. Compressive Strength: 8,300 psi minimum according to ASTM C 109 or 10,400 psi minimum according to ASTM C 579.
2. Tensile Strength: 1,350 psi minimum according to ASTM C 307 or 2,000 psi minimum according to ASTM D 638.
3. Flexural Modulus of Elasticity: 2,700 psi minimum according to ASTM C 580.
4. Water Absorption: 0.04 percent maximum according to ASTM D-570 or 0.1 percent maximum according to ASTM C 413.
5. Impact resistance: 160 inch pounds average, direct impact per ASTM D 2794 or Gardner Impact Test; 160 in./lb. no cracking, chipping or delamination.
6. Abrasion Resistance: 100 mg. maximum, average three test after 1000 cycles per ASTM D 4060.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry substrate for resinous flooring application.

B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.

1. Roughen concrete substrates as follows:
 - a. Comply with ASTM C 811 requirements unless manufacturer's written instructions are more stringent.
2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written instructions.
3. Verify that concrete substrates are dry and moisture-vapor emissions are within acceptable levels according to manufacturer's written instructions.
 - a. Anhydrous Calcium Chloride Test: ASTM F 1869. Proceed with application of resinous flooring only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. of slab area in 24 hours.
4. Alkalinity and Adhesion Testing: Verify that concrete substrates have pH within acceptable range. Perform tests recommended by manufacturer. Proceed with application only after substrates pass testing.

C. Patching and Filling: Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.

D. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.

3.2 APPLICATION

A. Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.

1. Expansion and Isolation Joint Treatment: At substrate expansion and isolation joints, comply with resinous flooring manufacturer's written instructions.

B. Primer: Apply primer over prepared substrate at manufacturer's recommended spreading rate.

C. Reinforcing Membrane: Apply reinforcing membrane to substrate cracks.

D. Waterproof Membrane: Install waterproof membrane over properly prepared existing floor and turn up existing walls 4". Installation and terminations shall be per manufacturer's recommendations.

1. Install membrane over entire shower room floor including underneath shower units.

E. Fill Material: Install fill material in accordance with manufacturer's written instructions to achieve floor slopes and thicknesses indicated.

1. Do not install fill material beneath shower units.

- F. Troweled or Screeded Body Coats: Apply troweled or screeded body coats in thickness indicated for flooring system. Hand or power trowel and grout to fill voids. When body coats are cured, remove trowel marks and roughness using method recommended by manufacturer.
- G. Grout Coat: Apply grout coat, of type recommended by resinous flooring manufacturer, to fill voids in surface of final body coat.
- H. Topcoats: Apply topcoats in number indicated for flooring system and at spreading rates recommended in writing by manufacturer and to produce wearing surface indicated.
- I. Protect resinous flooring from damage and wear during the remainder of construction period.

END OF SECTION 09 67 23

SECTION 09 96 00 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and the application of high-performance coating systems on the following substrates:
 - 1. Interior Substrates:
 - a. Steel.

1.2 DEFINITIONS

- A. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- B. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- C. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
 - 1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
- B. Samples: For each type of coating system and in each color and gloss of topcoat indicated.

1.4 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each coating system indicated to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each coating system.
 - a. Wall and Ceiling Surfaces: Provide samples of at least 100 sq. ft..
 - b. Other Items: Architect will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.

- a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products listed in the Exterior High-Performance Coating Schedule or Interior High-Performance Coating Schedule for the coating category indicated.

2.2 HIGH-PERFORMANCE COATINGS, GENERAL

- A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
- B. Material Compatibility:
 1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
 3. Products shall be of same manufacturer for each coat in a coating system.
- C. Colors: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- C. Proceed with coating application only after unsatisfactory conditions have been corrected.
 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and coating systems indicated.

- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.

3.3 APPLICATION

- A. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
- B. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

3.4 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

- A. Steel Substrates:
 - 1. Epoxy, High-Build System MPI INT 5.1Y:
 - a. Prime Coat: Primer, epoxy, anti-corrosive, for metal.
 - 1) Benjamin Moore & Co. Corotech Polyamide Epoxy Primer
 - 2) PPG Architectural Coatings. Amercoat 385
 - 3) Sherwin-Williams Company (The). Macropoxy 646 Fast Cure Epoxy
 - b. Intermediate Coat: High-build epoxy, matching topcoat.
 - c. Topcoat: High-build epoxy, low gloss, MPI #108.
 - 1) Benjamin Moore & Co. Corotech Polyamide Epoxy
 - 2) PPG Architectural Coatings. Amerlock 400
 - 3) Sherwin-Williams Company (The). Macropoxy 646 Fast Cure Epoxy

END OF SECTION 09 96 00

SECTION 22 00 00 - PLUMBING DESIGN BUILD REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes scope of work and design build requirements for Plumbing Work.
- B. Scope of Work:
 - 1. Replace the existing stainless steel showers and replace with a new stainless steel high security shower manufactured by Acorn. Minor modifications will have to be made to the existing drain piping below to accommodate the new showers.
 - 2. Remove the existing floor drains outside the shower stalls and replace with four new floor drains. Minor modifications to the drain piping will have to be made to accommodate the new drains.
 - 3. Remove the existing plastic water supply piping in walk-in chase and replace it with copper and insulating piping with flexible elastomeric insulation to help stop moisture and condensation throughout the plumbing chase and into the shower ceiling space.
- C. Related Sections:
 - 1. Section 01 33 00 "Submittal Procedures" for delegated-design submittal requirements.
 - 2. Section 01 40 00 "Quality Requirements" for delegated-design requirements.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Delegated-Design Submittal: For Plumbing Work.
 - 1. Construction Documents: Complete construction drawings signed and sealed by a Professional Engineer indicating all Plumbing Work to be performed.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Operation and maintenance data.
- C. As-built Drawings.

1.4 QUALITY ASSURANCE

- A. Professional Engineer Qualifications: refer to Section 01 40 00 "Quality Requirements".

B. Quality Standard: Comply with applicable Codes and regulations including, but not limited to:

1. International Plumbing Code 2009 as amended by Jefferson County and the City of Hillsboro.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MATERIALS

- A. (SH-1) Acorn No. 1732FA-SHL-03-M 32 inch x 32 inch x 88 inches tall, cabinet shower with front access, unit shall be factory piped and arranged to be installed on finished wall and serviced from the fixture side. Cabinet is fabricated from heavy duty 304 stainless steel; unit shall have stainless steel side panels to join the shower stalls together. Shower floor has stainless steel reinforcing, waste outlet fitting provided is an inside caulk type. Fitting includes a removable strainer to allow for 2 inch connection. Shower Valve is a pneumatically operated, pushbutton air-control valve using atmospheric air. Shower head is a 1.6 GPM penal lockable universal ball joint. Include stainless steel panels to attach showers, include all mounting brackets and hardware required.
- B. (SH-2) Acorn No. 1736-ADA-A 36 inch x 36 inch x 88 inches tall, ADA access cabinet shower with front access, unit shall be factory piped and arranged to be installed on finished wall and serviced from the fixture side. Cabinet is fabricated from heavy duty 304 stainless steel, unit shall have stainless steel side panels to join the shower stalls together. Shower floor has stainless steel reinforcing, waste outlet fitting provided is an inside caulk type. Fitting includes a removable strainer to allow for 2 inch connection. Shower Valve is a pneumatically operated, pushbutton air-control valve using atmospheric air. Shower head is a 1.6 GPM penal lockable universal ball joint. Include stainless steel panels to attach showers, include all mounting brackets and hardware required.
- C. Floor Drain - Shall be a 3 inch outlet drain, cast iron drain body with vandal resistant grate. Drain shall be a JR Smith No. 2005.
- D. All new water supply piping shall be Type "L" hard copper with sweat joints, new shut off valves shall be ball valves manufactured by Watts or Nibco.
- E. All new water supply piping shall be insulated with Flexible Elastomeric Insulation: Provide insulation composed of closed-cell, self-sealing, expanded rubber material. Comply with ASTM C 534, Type I for tubular materials. Polyolefin insulation products are not acceptable. Insulating materials shall be by Aeroflex USA and utilize pipe hanger supports Aero Fix-U rigid EPDM foam rubber, thickness to match pipe insulation
- F. All new drainage piping shall be service weight cast iron to math existing.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Division 01 Section "Quality Requirements," to design all Plumbing Work.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with applicable codes, standards and manufacturer's written instructions and recommendations for installation of plumbing work.

END OF SECTION 22 00 00

SECTION 23 00 00 - MECHANICAL DESIGN BUILD REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes scope of work and design build requirements for Mechanical Work.
- B. Scope of Work:
 - 1. Install a new 500 CFM ceiling fan that will properly exhaust the entire shower room. Minor modifications to the duct work and some electrical work would be required.
- C. Related Sections:
 - 1. Section 01 33 00 "Submittal Procedures" for delegated-design submittal requirements.
 - 2. Section 01 40 00 "Quality Requirements" for delegated-design requirements.
 - 3. Section 26 00 00 "Electrical Design Build Requirements".

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Delegated-Design Submittal: For Mechanical Work.
 - 1. Construction Documents: Complete construction drawings signed and sealed by a Professional Engineer indicating all Mechanical Work to be performed.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Operation and maintenance data.
- C. As-built Drawings.

1.4 QUALITY ASSURANCE

- A. Professional Engineer Qualifications: refer to Section 01 40 00 "Quality Requirements".
- B. Quality Standard: Comply with applicable Codes and regulations including, but not limited to:
 - 1. International Mechanical Code 2009 as amended by Jefferson County and the City of Hillsboro.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MATERIALS

- A. New exhaust fan shall be a minimum 500 CFM fan.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Division 01 Section "Quality Requirements," to design all Mechanical Work.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with applicable codes, standards and manufacturer's written instructions and recommendations for installation of Mechanical Work.
- B. Provide all cutting and patching of roof as needed. Roofing work shall be done by a roofing contractor approved by the roofing manufacturer and must be completed in a manner to maintain any existing warranties.

END OF SECTION 22 00 00

SECTION 26 00 00 - ELECTRICAL DESIGN BUILD REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes scope of work and design build requirements for Electrical Work.
- B. Scope of Work:
 - 1. Electrical Work associated with new exhaust fan.
 - 2. Electrical Work associated with salvage and reinstallation of items indicated on drawings and as required to perform the Work.
 - 3. Electrical Work associated with temporary relocation of items indicated on drawings and as required for installation of temporary lighting and security measures (closed circuit cameras).
- C. Related Sections:
 - 1. Section 01 33 00 "Submittal Procedures" for delegated-design submittal requirements.
 - 2. Section 01 40 00 "Quality Requirements" for delegated-design requirements.
 - 3. Section 23 00 00 "Mechanical Design Build Requirements".

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Delegated-Design Submittal: For Electrical Work.
 - 1. Construction Documents: Complete construction drawings signed and sealed by a Professional Engineer indicating all Electrical Work to be performed.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Operation and maintenance data.
- C. As-built Drawings.

1.4 QUALITY ASSURANCE

- A. Professional Engineer Qualifications: refer to Section 01 40 00 "Quality Requirements".

B. Quality Standard: Comply with applicable Codes and regulations including, but not limited to:

1. National Electrical Code 2008 as amended by Jefferson County and the City of Hillsboro.
2. Jefferson County Electrical Code 2008.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Division 01 Section "Quality Requirements," to design all Electrical Work.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with applicable codes, standards and manufacturer's written instructions and recommendations for installation of Electrical Work.

END OF SECTION 22 00 00

SECTION 28 20 00 – VIDEO SURVEILLANCE DESIGN BUILD REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes scope of work and design build requirements for Video Surveillance Work.
- B. Scope of Work:
 - 1. Expanding existing video surveillance system including the addition of four (4) Indoor Surface Mount Flexidome Cameras, associated cabling and wiring, power supplies and necessary mounting hardware.
 - a. Assumed approximate location of existing video surveillance system head end equipment is indicated on the drawings.
- C. Related Sections:
 - 1. Section 01 33 00 “Submittal Procedures” for delegated-design submittal requirements.
 - 2. Section 01 40 00 “Quality Requirements” for delegated-design requirements.
 - 3. Section 26 00 00 “Electrical Design Build Requirements.”
- D. Supplemental Information:
 - 1. Technical specifications of the 2012 Video Surveillance System Expansion are attached for reference only immediately after this Section.

1.2 ACTION SUBMITTALS

- A. Shop Drawings: Floor plans showing device identification and location
- B. Product Data: For each type of product.
- C. Delegated-Design Submittal: For Video Surveillance Work.
 - 1. Construction Documents: Complete construction drawings signed and sealed by a Professional Engineer indicating all Video Surveillance System work and associated Electrical Work to be performed.

1.3 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.
- B. As-built Drawings.
- C. Warranties.

1.4 QUALITY ASSURANCE

- A. Professional Engineer Qualifications: refer to Section 01 40 00 "Quality Requirements".
- B. The Contractor shall be responsible for providing, installing, and the initial operation of the flexidome cameras. The Contractor shall provide certified technicians on the job site.
- C. Contractor shall have a minimum of 2 years' experience installing Bosch Flexidome Cameras.
- D. The flexidome cameras shall be installed and tested to ensure all components are fully compatible with the Owner's existing system and can be integrated with all associated CCTV subsystems.
- E. The Contractor or sub-contractor shall be a Missouri licensed Security Contractor as required by the Missouri Department of Professional Regulation.
- F. Quality Standard: Comply with applicable Codes and regulations including, but not limited to:
 - 1. National Electrical Code 2008 as amended by Jefferson County and the City of Hillsboro.
 - 2. Jefferson County Electrical Code 2008.

1.5 WARRANTY OF INSTALLATION.

- A. Warrant the CCTV System for workmanship and installation for one (1) year. Equipment shall have the three (3) year manufacturer's warranty.

PART 2 - PRODUCTS

2.1 EQUIPMENT AND MATERIALS

- A. All equipment shall be UL 3004 compliant and rated for continuous operation. Environmental conditions (i.e. temperature, humidity, wind, and seismic activity) shall be taken under consideration at each facility and site location prior to installation of the equipment.
- B. All Equipment shall be installed, and programmed in a manner that will allow for ease of operation, programming, servicing, maintenance, testing, and upgrading of the system.
- C. All CCTV System components located in designated "HAZARDOUS ENVIRONMENT" areas where fire or explosion could occur due to the presence of natural gases or vapors, flammable liquids, combustible residue, or ignitable fibers or debris, shall be rated Class II, Division I, Group F, and installed in accordance with NFPA 70, Chapter 5.
- D. All equipment and materials shall be compatible to ensure correct operation.

2.2 INDOOR SURFACE MOUNTED FLEXIDOME CAMERAS:

- A. Match existing indoor dome cameras.

1. BASE BID: VDC-455V03-20S - FLEXIDOME-XT+, COLOR, W/2.6-6MM, WHITE, SMB.
2. ALTERNATE: VDN-498V03-21S - FLEXIDOME 2X, D/N, WDR, 2.8-10MM, WHITE, SMB

2.3 WIRES AND CABLES

- A. All Cables and Wires shall meet or exceed the manufactures recommendation for 24vac power and CCTV video signals.
- B. All cables shall be plenum rated cables.
- C. All coaxial cables shall be constructed of solid copper center conductor and 95% bare copper braided shield.
- D. RG59 coax shall be used for camera to encoder cable distances of 800' or less. RG-6u CCTV coax shall be used for camera to encoder cable distances of 1,500' or less.
- E. At all locations where there is a wall penetration or core drilling is conducted to allow for cable to be installed, fire stopping materials shall be applied to that area
- F. High voltage and signal cables shall not share the same cable run or conduit and shall be kept separate up to the point of connection. High voltage for the CCTV system shall be defined as any cable or sets of cables carrying 30 VDC/VAC or higher.
- G. All cables and conductors, except fiber optic cables, that act as a control, communication, or signal lines shall include surge protection. Surge protection shall be furnished at the equipment end and additional triple electrode gas surge protectors rated for the application on each wire line circuit shall be installed within three (3) ft. (one (1) m.) of the building cable entrance. The inputs and outputs shall be tested in both normal and common mode using the following wave forms:
 1. A 10 microsecond rise time by 1000 microsecond pulse width waveform with a peak voltage of 1500 watts and peak current of 60 amperes.
 2. An 8 microsecond rise time by 20 microsecond pulse width wave form with a peak voltage of 1000 volts and peak current of 500 amperes.
 3. The surge suppression device shall not attenuate or reduce the video or sync signal under normal conditions. Fuses and relays shall not be used as a means of surge protection.

2.4 POWER CABLES

- A. All Power Cables shall be sized accordingly and shall comply with the NEC. Low voltage cables will be a minimum of 18 AWG, stranded and non-conductive CMP (Plenum) jacket.
- B. Power Cables shall be utilized for all components of the CCTV System that require either a 110 VAC 60 Hz or 220 VAC 50 Hz input. Each feed will be connected to a dedicated circuit breaker at a power panel that is primarily for the CCTV system.

- C. All equipment connected to AC power shall be protected from surges. Equipment protection shall withstand surge test waveforms described in IEEE C62.41. Fuses shall not be used as a means of surge protection.
- D. Shall be rated for either 110 or 220 VAC, 50 or 60 Hz, and shall comply with Bosch specifications and the NEC.
- E. Low Voltage Power Cables
 - 1. Shall be a minimum of 18 AWG, Stranded and have a CMP (Plenum) outer jacket.
 - 2. Cable size shall be determined using a basic voltage over distance calculation and shall comply with the NEC's requirements for low voltage cables.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Installation shall be in accordance with NECA 303, manufacturer and related documents and references, for each type of CCTV subsystem designed, engineered and installed.
- B. The Contractor shall install all system components including Jefferson County furnished equipment, and appurtenances in accordance with the manufacturer's instructions and shall furnish all necessary connectors, terminators, interconnections, services, and adjustments required for a complete and operable system.
- C. The CCTV System will be designed, engineered, installed, and tested to ensure all components are fully compatible with the existing system and can be integrated with the Owner's existing network.

3.2 CAMERA INSTALLATION:

- A. Install the cameras with the focal length lens set for Owner approval in each zone.
- B. Connect power and signal lines to the camera.
- C. Set cameras with fixed iris lenses to the f-stop to give full video level.
- D. Aim camera to give field of view as needed to cover the zone.
- E. Focus the lens to give a sharp picture (to include checking for day and night focus and image quality) over the entire field of view; and synchronize all cameras so the picture does not roll on the monitor when cameras are selected.

3.3 SUPPLEMENTAL CONTRACTOR QUALITY CONTROL

- A. The Contractor shall provide the services of Bosch certified technical representatives who are familiar with all components and installation procedures of the installed System; and are approved by the Jefferson County Project Manager.
- B. The Contractor will be present on the job site during the preparatory and initial phases of quality control to provide technical assistance.
- C. The Contractor shall also be available on an as needed basis to provide assistance with follow-up phases of quality control.
- D. The Contractor shall participate in the testing and validation of the system and shall provide certification that the system installed is fully operational as all construction document requirements have been fulfilled.

END OF SECTION 22 00 00

SPECIFICATIONS
JEFFERSON COUNTY SHERIFF'S OFFICE JAIL
VIDEO SURVEILLANCE SYSTEM

HILLSBORO MO

PART 1 – GENERAL

1.1 DESCRIPTION

The Jefferson County Sheriff's Office (Jail) is requesting bids for the purchase, installation, and programming of a surveillance system to be integrated into the current system at 510 First Street in Hillsboro, Missouri. The Jefferson County Sheriff's Office reserves the right to accept or reject any or all bids in part or in whole as deemed in the best interest of the Jefferson County Sheriff's Office. In determining the most advantageous bid, the Jefferson County Sheriff's Office reserves the right to consider quantity, workmanship, service, dependability of the product, manufacturer and dealer accountability and if company is a prior vendor in good standing, all independent of price.

Video Surveillance System, which is identified as the Closed Circuit Television System hereinafter referred to as the CCTV System as specified in this section. This system shall also include expansion of the existing Bosch Allegiant 8800 Video Matrix System and updates to the existing Wonderware Software to accommodate new cameras. The system shall add 2 new Bosch KBD-Universal Keyboard with remote hook-up kit, new Bosch Recording Station (BRS) Network Video Recorder, BRS Remote Client(s), 16 channel IP encoders, new Bosch Minidome Color and Day Night Cameras, and new Bosch Corner Mount Security Cameras. Audio will be added to key camera locations. Exterior & sally port cameras shall include wall mount hardware.

The Contractor shall calculate the necessary hard drive space required to record all of the cameras for 30 days. Each camera shall be programmed for continuous and motion recording. The recording time shall be set for 3/75 ips continuous at 2 cif and 15 seconds pre and 15 seconds post at 15 frames per second at 4 cif.

FOR BID
1.2 RELATED WORK

- A. All new network infrastructures shall be supplied by Contractor. This includes Cat 5e wiring to new Network Video Recorder, new 16ch IP encoders and 10\100\1000 network switch(es).
- B. Contractor shall supply Wonderware integration for 3rd and 4th viewing stations.
- C. Contractor shall supply and install all cameras and necessary mounting hardware.

- D. Contractor shall supply and install all necessary network video recorders.
- E. Contractor shall supply and install all camera power supplies.
- F. Contractor shall confirm existing remote video PC specifications meet or exceed Bosch BRS client specifications. Contractor then will configure remote PC with BRS client.
- G. Contractor shall program and configure all CCTV devices.
- H. Contractor shall be responsible for the NVR HDD calculations.

1.3 QUALITY ASSURANCE

- A. The Contractor shall be responsible for providing, installing, and the initial operation of the CCTV System as shown. The Contractor shall provide Bosch Allegiant Matrix System and Bosch BRS certified technicians on the job site.
- B. Contractor shall have a minimum of 2 years experience installing Bosch Allegiant Matrix, Flexidome Cameras and Bosch BRS or Dibos Video Recorders.
- C. The CCTV system shall be installed and tested to ensure all components are fully compatible as a system and can be integrated with all associated CCTV subsystems to include Wonderware Software.
- C. The Contractor or CCTV sub-contractor shall be a Missouri licensed Security Contractor as required by the Missouri Department of Professional Regulation.

1.4 SUBMITTALS

- A. Submit Shop Drawings, Product Data Sheets.
- B. Provide certificates of compliance with Bosch BRS Appliance and Bosch Allegiant Matrix.
- C. Provide a pre-installation and as-built design package in both electronic format and on paper, minimum size 48 x 48 inches (1220 x 1220 millimeters); drawing submittals shall be per the established project schedule.
- D. Pre-installation design and as-built packages shall include, but not be limited to:
 1. Index Sheet that shall:
 - a. Define each page of the design package to include facility name, building name, floor, and sheet number.
 - b. Provide a list of all CCTV abbreviations and symbols.
 - c. Reference all general notes that are utilized within the design package.
 - d. Specification and scope of work pages for all CCTV systems that are applicable to the design package that will:

- 1) Outline all general and job specific work required within the design package.
- 2) Provide a device identification table outlining Device Identification (ID) and use for all CCTV systems equipment utilized in the design package.
2. Drawing sheets that will be plotted on the individual floor plans or site plans shall:
 - a. Include a title block as defined above.
 - b. Define the drawings scale in both standard and metric measurements.
 - c. Provide device identification and location.
4. A system drawing for each applicable CCTV system shall:
 - a. Identify how all equipment within the system, from camera to recording device to remote view stations, shall be laid out and connected.
 - b. Provide full detail of all system components wiring from point-to-point.
 - c. Identify wire types utilized for connection, interconnection with associate CCTV subsystems.
 - d. Show device locations that correspond to the floor plans.
 - e. All general and drawing specific notes shall be included with the system drawings.
5. A schedule for all of the applicable CCTV subsystems shall be included. All schedules shall provide the following information:
 - a. Device ID.
 - b. Device Location (e.g. site, building, floor, room number, location, and description).
 - c. Mounting type (e.g. flush, wall, surface, wall, corner, etc.).
 - d. Power supply or circuit breaker and power panel number.
 - e. In addition, provide the camera ID, camera type (color or day/night).
6. Detail and elevation drawings for all devices that define how they were installed and mounted.

E. Pre-installation design packages shall be reviewed by the Contractor along with a Jefferson County representative to ensure all work has been clearly defined and completed. All reviews shall be conducted in accordance with the project schedule. There shall be four (4) stages to the review process:

1. 35 percent
2. 65 percent
3. 90 percent
4. 100 percent

F. Provide manufacturer CCTV system product data-sheets. Submit for approval at least 14 days prior to commencement of formal testing, a CCTV System Operational Test Plan. Include procedures for

operational testing of each component and CCTV subsystem, to include performance of an integrated system test.

G. Provide all maintenance and operating manuals.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below (including amendments, addenda, revisions, supplement, and errata) form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA):
 - 330.....Electrical Performance Standards for CCTV Cameras
 - 375A.....Electrical Performance Standards for CCTV Monitors
- C. Institute of Electrical and Electronics Engineers (IEEE):
 - C62.41IEEE Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits
 - 802.3afPower over Ethernet Standard
- D. National Electrical Contractors Association (NECA):
 - 303-2005Installing Closed Circuit Television (CCTV) Systems
- E. National Fire Protection Association (NFPA):
 - 70-05Article 780-National Electrical Code
- F. Federal Information Processing Standard (FIPS):
 - 140-2CCTV Requirements for Cryptographic Modules
- G. Underwriters Laboratories, Inc. (UL):
 - 983-06Standard for Surveillance Camera Units
 - 3044-01Standard for Surveillance Closed Circuit Television Equipment

1.6 WARRANTY OF INSTALLATION.

Warrant the CCTV System for workmanship and installation for one (1) year. Equipment shall have the three (3) year manufacturer's warranty.

1.7 Maintenance and ongoing software support.

Show the price for one, two and three year, for additional maintenance and support agreement.

Maintenance and ongoing software support shall include the existing cameras.

Describe the response for Emergency Maintenance Requests, and estimated response time for complete system failure.

Is there twenty-four (24) notification and response?

1.8 Pricing Structure

Show one price for total material cost and show one price for total labor cost.

PART 2 – PRODUCTS

2.1 EQUIPMENT AND MATERIALS

- A. All equipment associated within the CCTV System shall be UL 3004 compliant and rated for continuous operation. Environmental conditions (i.e. temperature, humidity, wind, and seismic activity) shall be taken under consideration at each facility and site location prior to installation of the equipment.
- B. The system shall be installed, and programmed in a manner that will allow for easy of operation, programming, servicing, maintenance, testing, and upgrading of the system.
- C. All CCTV System components located in designated “HAZARDOUS ENVIRONMENT” areas where fire or explosion could occur due to the presence of natural gases or vapors, flammable liquids, combustible residue, or ignitable fibers or debris, shall be rated Class II, Division I, Group F, and installed in accordance with NFPA 70, Chapter 5.
- D. All equipment and materials for the system shall be compatible to ensure correct operation.

2.2 EQUIPMENT ITEMS

A. BOSCH ALLEGIANT MATRIX ADDITIONS:

The Jefferson County Sheriff's Jail has 26 existing analog cameras connected to the existing Allegiant 8800 Series matrix. The Allegiant is currently configured for 32 analog cameras by 8 monitors. The existing cameras are looped to an existing Bosch Dibos DVR. There is also a WonderWare GUI Control Software Package integrated to the Allegiant Matrix. Jefferson County Sheriff's Jail currently is using two remote Video Monitor locations each with 1 Allegiant Keyboard and two monitors. These will continue to be used in addition to a third and fourth location with 1 Allegiant Keyboard and two monitors each.

Contractor shall provide, install, and configure the following devices:

QTY - (2) LTC 8821/00 – ALLEGIANT 32 CHANNEL VIDEO INPUT CARDS

QTY - (2) LTC 8808/00 - 32 CHANNEL VIDEO INTERCONNECT PANEL, INCLUDE TWO LTC 8809/00 3' 16 CONDUCTION RIBBON CABLES.

Option - (4) LTC 8809/02 - 16 CONDUCTOR RIBBON CABLE, FOR ALLEGIANT SYSTEMS, 10.5 FT

QTY - (1) LTC 8059/00 - ALLEGIANT MASTER CONTROL SOFTWARE PACKAGE

QTY - (2) KBD-UNIVERSAL - INTUIKEY UNIVERSAL DIGITAL KEYBOARD W/ LCD

QTY - (2) LTC 8557/60 - HOOK-UP KIT FOR REMOTE KEYBOARD UP TO 5000 FT.

QTY – (4) UML-262-90 - 26-INCH COLOR LCD MONITOR, 600 TVL, VGA, CVBS

B. BOSCH Recording Station (BRS) NVR

The Jefferson County Sheriff's Jail is currently using one Bosch Dibos 30 CH DVR mounted in a wall mount equipment rack location with the Bosch Allegiant Matrix System. This Bosch Dibos DVR will continue to be used for recording up to 30 cameras. Up to 4 of the new cameras can be connected to the Bosch Dibos Recorder and configured for recording and remote viewing. The decision to keep this DVR in its current Rack location or move this DVR to the new Lowell Wall mount rack is the Contractor's decision. High quality RG59 or RG6 CCTV coax "jumpers" will be used to connect video signals to the new Lowell equipment rack via the Bosch Allegiant LTC 8808/00 video interconnect panels. The BRS remote software will be configured to remotely view live and recorded video from the BRS and the Dibos.

QTY – (1) BRS-RAC2-8200A – 2 RU 16TB Rack Mount NVR 8TB (8 X 2TB) HOT-

SWAPPABLE HDD; INCLUDES 8 CHANNEL LICENSE (EXPANDABLE TO 64)

QTY – (1) BRS-XCAM-32A - BRS EXPANSION LICENSE, 32IP CHANNELS

QTY – (3) BRS-XCAM-04A - BRS EXPANSION LICENSE, 4IP CHANNELS

QTY – (1) PS2 Mouse

QTY – (1) PC Monitor

C. RACK MOUNT 16 CH. IP ENCODER

QTY – (4) VIP-X1600-B - CHASSIS

QTY – (13) VIP-X1600-XFM4A - 4CH ENCODER MODULE, H.264, W/ AUDIO

QTY – (4) VIP-X1600-PS - POWER SUPPLY UNIT

D. INDOOR SURFACE MOUNT FLEXIDOME CAMERAS:

QTY – (27) VDC-455V03-20S - FLEXIDOME-XT+, COLOR, W/2.6-6MM, WHITE, SMB

Option-(7) VDN-498V03-21S - FLEXIDOME 2X, D/N, WDR, 2.8-10MM, WHITE, SMB

C. Outdoor Wall Mount FlexiDome Day Night Cameras

QTY – (3) VDN-498V03-21S - FLEXIDOME 2X, D/N, WDR, 2.8-10MM, WHITE, SMB

QTY – (3) VDA-WMT-DOME - WALL MOUNT FOR FLEXIDOME

D. Sally Port Wall Mount FlexiDome Day Night Cameras

QTY - (4) VDN-498V03-21S - FLEXIDOME 2X, D/N, WDR, 2.8-10MM, WHITE, SMB

QTY - (4) VDA-WMT-DOME - WALL MOUNT FOR FLEXIDOME

E. BOSCH EX36 CORNER MOUNT CAMERA

QTY - (16) EX36MNX902W-N - IR CORNER MOUNT D/N, 940NM 2.5MM

D. BOSCH EX36 CORNER MOUNT CAMERA WITH MICROPHONE

QTY - (3) EX36MNX902WM-N - IR CORNER MOUNT D/N, 940NM 2.5MM W/
MICROPHONE

E. BOSCH BRS NVR

QTY - (1) BRS-RAC2-8100A - 2 RU 8TB Rack Mount NVR 8TB (8 X 1TB) HOT-SWAPPABLE
HDD; INCLUDES 8 CHANNEL LICENSE (EXPANDABLE TO 64)

QTY - (1) BRS-XCAM-32A - BRS EXPANSION LICENSE, 32 IP CHANNELS

QTY - (3) BRS-XCAM-04A - BRS EXPANSION LICENSE, 4 IP CHANNELS

F. RACK MOUNT 16 CH. IP ENCODER

QTY - (4) VIP-X1600-B - CHASSIS

QTY - (13) VIP-X1600-XFM4A - 4CH ENCODER MODULE, H.264, W/ AUDIO

QTY - (4) VIP-X1600-PS - POWER SUPPLY UNIT

G. RACK MOUNT POWER SUPPLY

QTY - (2) R2432600ULCB - CCTV 24VAC Rack Mount 32 Output Power Supply

H. Lightning protection and Power Conditioning

QTY-5 (MINUTEMAN LINE GUARD MMS-CAT6-POE, SURGE SUPPRESSORS).

QTY-1 APC UPS OR RACK MOUNT UPS

QTY-1 (MINUTEMAN E1500RM2U ENTERPRISE PLUS LINE INTERACTIVE UPS
WITH RACK MOUNTING HARDWARE).

I. Lowell Wall Mount Equipment Rack

QTY-1 LWBR-3532 – WALL MOUNT RACK W/ BASE

QTY-1 LFD-35 – FRONT DOOR

QTY-1

J. Wires and Cables

1. Shall meet or exceed the manufacturer's recommendation for 24vac power and CCTV video signals.
2. All cables shall be plenum rated cables.
3. All coaxial cables shall be constructed of solid copper center conductor and 95% bare copper braided shield.
4. RG59 coax shall be used for camera to encoder cable distances of 800' or less. RG-6u CCTV coax shall be used for camera to encoder cable distances of 1,500' or less.
5. At all locations where there is a wall penetration or core drilling is conducted to allow for cable to be installed, fire stopping materials shall be applied to that area
6. High voltage and signal cables shall not share the same cable run or conduit and shall be kept separate up to the point of connection. High voltage for the CCTV system shall be defined as any cable or sets of cables carrying 30 VDC/VAC or higher.
7. All cables and conductors, except fiber optic cables, that act as a control, communication, or signal lines shall include surge protection. Surge protection shall be furnished at the equipment end and additional triple electrode gas surge protectors rated for the application on each wire line circuit shall be installed within three (3) ft. (one (1) m.) of the building cable entrance. The inputs and outputs shall be tested in both normal and common mode using the following wave forms:
 - a. A 10 microsecond rise time by 1000 microsecond pulse width waveform with a peak voltage of 1500 watts and peak current of 60 amperes.
 - b. An 8 microsecond rise time by 20 microsecond pulse width waveform with a peak voltage of 1000 volts and peak current of 500 amperes.

8. The surge suppression device shall not attenuate or reduce the video or sync signal under normal conditions. Fuses and relays shall not be used as a means of surge protection.
9. Power Cables
 - a. Will be sized accordingly and shall comply with the NEC. Low voltage cables will be a minimum of 18 AWG, stranded and non-conductive CMP (Plenum) jacket.
 - b. Will be utilized for all components of the CCTV System that require either a 110 VAC 60 Hz or 220 VAC 50 Hz input. Each feed will be connected to a dedicated circuit breaker at a power panel that is primarily for the CCTV system.
 - c. All equipment connected to AC power shall be protected from surges. Equipment protection shall withstand surge test waveforms described in IEEE C62.41. Fuses shall not be used as a means of surge protection.
 - d. Shall be rated for either 110 or 220 VAC, 50 or 60 Hz, and shall comply with Bosch specifications and the NEC.
 - e. Low Voltage Power Cables
 - 1) Shall be a minimum of 18 AWG, Stranded and have a CMP (Plenum) outer jacket.
 - 2) Cable size shall determined using a basic voltage over distance calculation and shall comply with the NEC's requirements for low voltage cables.

~~FOR INFORMATION ONLY~~ K. Additional Monitors and Equipment

QTY-1 60" Full HD 1080p Monitor for installation in the Commander's Office on the 2nd floor

QTY- 4 40" Full HD 1080p Monitor for installation in Level I, Level II, Level III, and Level IV Control Centers.

QTY – 2 Desk top computers (minimum 4 gig memory) with 26" Monitor, DVD Burn/copy capability, and suitable printer for remote viewing/evidence, and subpoena compliance.

~~FOR INFORMATION ONLY~~ L. Camera Locations

1. Level 2 Entrance Waiting Room/Lobby
2. Level 2 Front Security Area
3. Level 2 Bonding Area
4. Level 2 Sally Port (Front/Interior)
5. Level 2 Sally Port (Rear/Interior)
6. Level 2 Searching Area
7. Level 2 Searching Area (Microphone)
8. Level 2 Booking Area – Table

9. Level 2 Booking – Fingerprint
10. Level 2 Booking – Hallway
11. Level 2 Booking – Hallway
12. Level 2 Nurse
13. Level 2 Nurse
14. Level 2 Visitation Entry Hallway
15. Level 2 Holdover 260 (Microphone)
16. Level 2 Holdover 260
17. Level 2 Holdover 260
18. Level 2 Suicide Cell # 215
19. Level 2 Suicide Cell # 214
20. Level 3 Hallway
21. Level 3 Sally Port
22. Level 3 Sally Port
23. Level 3 Pod 1
24. Level 3 Pod 1
25. Level 3 Pod 2
26. Level 3 Pod 2
27. Level 3 Pod 3
28. Level 3 Pod 3
29. Level 3 Pod 4
30. Level 3 Pod 4
31. Level 3 Pod 5
32. Level 3 Pod 5
33. Level 3 Pod 6
34. Level 3 Pod 6
35. Level Hallway
36. Level 1 Sally Port
37. Level 1 Sally Port
38. Level 1 Pod 1
39. Level 1 Pod 1
40. Level 1 Pod 2
41. Level 1 Pod 2
42. Level 1 Pod 3
43. Level 1 Pod 3
44. Level 1 Pod 4
45. Level 1 Pod 4
46. Level 1 Pod 5
47. Level 1 Pod 5
48. Level 1 Recitation Yard
49. Level 1 Rear Exterior Entry into 216
50. Level 1 Rear Exterior Entry into 146
51. Level 2 Front Exterior Entrance
52. Level 2 Front Exterior Sally Port
53. Level 2 Rear Exterior Sally Port
54. Interview Room # 109 Upstairs (Microphone) This location must have an automatic audio function to allow for the audio to come on when individuals enter the room to conduct interviews.

~~DO NOT USE~~ **REFERENCE ONLY**

M. OPTIONS

1. Replace (27) VDC-455V03-20S - FLEXIDOME-XT+, COLOR, W/2.6-6MM, WHITE, SMB with (27) VDN-498V03-21S - FLEXIDOME 2X, D/N, WDR, 2.8-10MM, WHITE, SMB
2. Allow full audio capabilities for maximum amount of cameras (37) utilizing Louroe ASK KIT.
3. Expand Capabilities for recording of all cameras (including cameras currently installed) from thirty (30) days to forty-five (45) days. List costs for additional terabytes and capabilities for extended recording
4. Expand full audio recording capabilities to three (3) Dorms on Level 4.

PART 3

3.1 INSTALLATION

- A. System installation shall be in accordance with NECA 303, manufacturer and related documents and references, for each type of CCTV subsystem designed, engineered and installed.
- B. Components shall be configured with appropriate "service points" to pinpoint system trouble in less than 30 minutes.
- C. The Contractor shall install all system components including Jefferson County furnished equipment, and appurtenances in accordance with the manufacturer's instructions and shall furnish all necessary connectors, terminators, interconnections, services, and adjustments required for a complete and operable system.
- D. The CCTV System will be designed, engineered, installed, and tested to ensure all components are fully compatible as a system and can be integrated with all associated CCTV subsystems, whether the system is a stand alone or a complete network.
- E. For integration purposes, the CCTV System shall be integrated where appropriate with the following associated CCTV subsystems:

Bosch Allegiant Matrix to WonderWare Graphic User Interface.

Bosch Allegiant Matrix Camera Video Signals Looped to Bosch IP Encoders

Bosch IP Encoders configured with Bosch Recording Station

Bosch Recording Station to Dibos Integration

F. Integration with these CCTV subsystems shall be achieved by computer software programming, firmware updates, and any required hardware upgrades to the systems.

G. For programming purposes refer to the manufacturers requirements for correct system operations. Ensure computers being utilized for system integration meet or exceed the minimum system requirements outlined on the systems software packages.

H. A complete CCTV System shall be comprised of, but not limited to, the following components:

1. Cameras
2. Lenses
3. Video Display Equipment
4. Camera Housings and Mounts
5. Controlling Equipment
6. Recording Devices
7. Camera Power Supplies
8. Wiring and Cables (with surge protection devices)
9. System Configuration

I. The Contractor shall visit the site and verify that site conditions are in agreement/compliance with this request for proposal. The Contractor shall report all changes to the site or conditions that will affect performance of the system to the Jefferson County Project Manager in the form of a report. The Contractor shall not take any corrective action without written permission received from the Jefferson County Project Manager.

1. The Contractor shall make written requests and obtain approval prior to disconnecting any signal lines and equipment, and creating equipment downtime. Such work shall proceed only after receiving Jefferson County Project Manager approval of these requests. If any device fails after the Contractor has commenced work on that device, signal or control line, the Contractor shall diagnose the failure and perform any necessary corrections to the equipment.
2. The Contractor shall be held responsible for repair costs due to Contractor negligence, abuse, or incorrect installation of equipment.

J. Enclosure Penetrations:

All enclosure penetrations shall be from the bottom of the enclosure unless the system design requires penetrations from other directions. Penetrations of interior enclosures involving transitions of conduit from interior to exterior, and all penetrations on exterior enclosures shall be sealed with rubber silicone sealant to preclude the entry of water and will comply with NFPA, Firestopping. The conduit riser shall

terminate in a hot-dipped galvanized metal cable terminator. The terminator shall be filled with an approved sealant as recommended by the cable manufacturer and in such a manner that the cable is not damaged.

K. Cold Galvanizing:

All field welds and brazing on factory galvanized boxes, enclosures, and conduits shall be coated with a cold galvanized paint containing at least 95 percent zinc by weight.

L. Interconnection of Console Video Equipment:

The Contractor shall connect signal paths between video equipment as specified by the OEM. Cables shall be as short as practicable for each signal path without causing strain at the connectors. Rack mounted equipment on slide mounts shall have cables of sufficient length to allow full extension of the slide rails from the rack.

M. Cameras:

1. Install the cameras with the focal length lens set for owner approval in each zone.
2. Connect power and signal lines to the camera.
3. Set cameras with fixed iris lenses to the f-stop to give full video level.
4. Aim camera to give field of view as needed to cover the zone.
5. Aim fixed mounted cameras installed outdoors facing the rising or setting sun sufficiently below the horizon to preclude the camera looking directly at the sun.
6. Focus the lens to give a sharp picture (to include checking for day and night focus and image quality) over the entire field of view; and synchronize all cameras so the picture does not roll on the monitor when cameras are selected.

N. Monitors:

1. Install the video monitors as specified by the manufacturer.
2. Connect all signal inputs and outputs as shown and specified.
3. Terminate video input signals as required.
4. Connect the monitor to AC power.

O. Video Recording Equipment:

1. Install the video recording equipment as specified by the manufacturer.
2. Connect video signal inputs and outputs as shown and specified.
3. Connect alarm signal inputs and outputs as shown and specified.
4. Connect video recording equipment to AC power.

P. Video Signal Equipment:

1. Install the video signal equipment as specified by the manufacturer.

2. Connect video or signal inputs and outputs as shown and specified.
3. Terminate video inputs as required.
4. Connect alarm signal inputs and outputs as required.
5. Connect control signal inputs and outputs as required
6. Connect electrically powered equipment to AC power.

Q. Camera Housings and Mounts:

1. Install the camera housings and mounts as specified by the manufacturer, provide mounting hardware sized appropriately to secure each camera, housing and mount with maximum wind and ice loading encountered at the site.
2. Connect signal lines and AC power to the housing interfaces.

R. System Start-Up:

1. The Contractor shall not apply power to the CCTV System until the following items have been completed:
 - a. CCTV System equipment items and have been set up in accordance with manufacturer's instructions.
 - b. A visual inspection of the CCTV System has been conducted to ensure that defective equipment items have not been installed and that there are no loose connections.
 - c. System wiring has been tested and verified as correctly connected as indicated.
 - d. All system grounding and transient protection systems have been verified as installed and connected as indicated.
 - e. Power supplies to be connected to the CCTV System have been verified as the correct voltage, phasing, and frequency as indicated.
2. Satisfaction of the above requirements shall not relieve the Contractor of responsibility for incorrect installation, defective equipment items, or collateral damage as a result of Contractor work efforts.

S. Supplemental Contractor Quality Control

1. The Contractor shall provide the services of Bosch BVMS and Bosch Video Encoder certified technical representatives who are familiar with all components and installation procedures of the installed CCTV System; and are approved by the Jefferson County Project Manager.
2. The Contractor will be present on the job site during the preparatory and initial phases of quality control to provide technical assistance.
3. The Contractor shall also be available on an as needed basis to provide assistance with follow-up phases of quality control.

4. The Contractor shall participate in the testing and validation of the system and shall provide certification that the system installed is fully operational as all construction document requirements have been fulfilled.

3.2 TESTING AND TRAINING

Contractor shall provide a total of 10 hours of on-site system operation training at the Jefferson County Sheriff's Jail. Contractor shall coordinate with Jefferson County Project Manager to arrange training times.

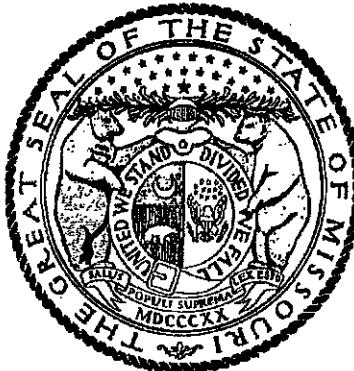
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FOR REFERENCE ONLY

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



JEREMIAH W. (JAY) NIXON, Governor

Annual Wage Order No. 23

Section 050
JEFFERSON COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by

John E. Lindsey, Director
Division of Labor Standards

This Is A True And Accurate Copy Which Was Filed With The Secretary of State: March 10, 2016

Last Date Objections May Be Filed: April 11, 2016

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	** Date of Increase	*	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Asbestos Worker (H & F) Insulator			\$38.36	55	60	\$21.41
Boilermaker			\$32.76	126	7	\$30.10
Bricklayer and Stone Mason	6/16		\$32.50	72	5	\$21.80
Carpenter	6/16	e	\$36.98	77	41	\$16.30
Cement Mason	6/16		\$31.16	80	6	\$17.95
Communication Technician			\$31.35	44	47	\$9.53 + 31.75%
Electrician (Inside Wireman)	10/16		\$35.70	82	71	\$10.84 + 38.5%
Electrician (Outside-Line Construction\Lineman)	9/16		\$43.75	43	45	\$5.25 + 36%
Lineman Operator	9/16		\$37.73	43	45	\$5.25 + 36%
Groundman	9/16		\$29.11	43	45	\$5.25 + 36%
Elevator Constructor		a	\$46.04	26	54	\$31.645
Glazier			\$33.40	87	31	\$23.55
Ironworker			\$32.88	11	8	\$23.825
Laborer (Building):						
General		b	\$26.71	73	7	\$12.77
First Semi-Skilled		d	\$26.71	73	7	\$12.77
Second Semi-Skilled		c	\$26.71	73	7	\$12.77
Lather						USE CARPENTER RATE
Linoleum Layer and Cutter	6/16		\$31.83	92	26	\$16.00
Marble Mason	6/16		\$31.83	76	51	\$14.62
Marble Finisher	6/16		\$26.42	76	51	\$13.95
Millwright			\$36.34	77	41	\$15.75
Operating Engineer						
Group I	6/16		\$32.41	3	66	\$25.13
Group II	6/16		\$32.41	3	66	\$25.13
Group III	6/16		\$30.51	3	66	\$25.13
Group III-A	6/16		\$32.41	3	66	\$25.13
Group IV	6/16		\$27.05	3	66	\$25.13
Group V	6/16		\$27.05	3	66	\$25.13
Painter			\$31.65	104	12	\$13.76
Pile Driver						USE CARPENTER RATE
Pipe Fitter	7/16		\$38.00	91	69	\$26.93
Plasterer	7/16		\$31.56	67	3	\$17.98
Plumber	7/16		\$38.00	91	69	\$26.93
Roofer \ Waterproofer			\$31.35	15	73	\$17.12
Sheet Metal Worker			\$39.63	32	25	\$21.72
Sprinkler Fitter - Fire Protection			\$41.56	66	18	\$22.02
Terrazzo Worker	6/16		\$32.30	116	5	\$13.79
Terrazzo Finisher			\$30.35	116	5	\$11.84
Tile Setter	6/16		\$31.83	76	51	\$14.62
Tile Finisher	6/16		\$26.42	76	51	\$13.95
Traffic Control Service Driver			\$28.775	22	55	\$9.045
Truck Driver-Teamster			\$30.41	35	36	\$10.82

Fringe Benefit Percentage is of the Basic Hourly Rate

**Annual Incremental Increase

* Welders receive rate prescribed for the occupational title performing operation to which welding is incidental.

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

- a - Vacation: Employees over 5 years - 8%; Employees under 5 years - 6%
- b - Projects over \$1 Million - \$26.71; Projects under \$1 Million - \$24.56
- c - Projects over \$1 Million - \$26.71.; Projects under \$1 Million - \$24.56
- d - Projects over \$1 Million - \$26.71; Projects under \$1 Million - \$24.56
- **e - Projects over \$1 Million - \$36.98; Projects under \$1 Million - \$31.89

**JEFFERSON COUNTY
BUILDING CONSTRUCTION - OVERTIME SCHEDULE**

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 1/2) shall be paid for all work in excess of forty (40) hours per work week.

NO. 3: Means the regular workday shall consist of eight (8) consecutive hours, exclusive of a thirty (30) minute lunch period, with pay at the straight time rate. The regular workday shall begin between the hours of 6:00 a.m. and 9:00 a.m. The Employer may have the option to schedule the work week from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be paid at the applicable overtime rate. If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather, holiday or other conditions beyond the control of the Employer, they shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours for the workweek. All overtime work performed on Monday through Saturday shall be paid at time and one-half (1 1/2) the hourly rate plus an amount equal to one-half (1/2) of the hourly Total Indicated Fringe Benefits. All work performed on Sundays and recognized holidays shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Shifts may be established when considered necessary by the Employer. Shift hours and rates will be as follows. If shifts are established, work on the First Shift will begin between 6:00 a.m. and 9:00 a.m. and consist of eight (8) hours of work plus one-half hour unpaid lunch. Hours worked during the first shift will be paid at the straight time rate of pay. The second shift shall start eight hours after the start of the first shift and consist of eight (8) hours of work plus one-half hour unpaid lunch. Work on the second shift will begin between 2:00 p.m. and 5:00 p.m. and be paid the straight time rate plus \$2.50 per hour. The third shift shall start eight hours after the start of the second shift and consist of eight (8) hours plus one-half hour unpaid lunch. Work on the third shift will begin between 10:00 p.m. and 1:00 a.m. and be paid the straight time rate plus \$3.50 per hour. The additional amounts that are to be paid are only applicable when working shifts. Shifts that begin on Saturday morning through those shifts which end on Sunday morning will be paid at time and one-half these rates. Shifts that begin on Sunday morning through those shifts which end on Monday morning will be paid at double time these rates.

NO. 11: Means eight (8) hours shall constitute a day's work, with the starting time to be established between 6:00 a.m. and 8:00 a.m. from Monday to Friday. Time and one-half (1 1/2) shall be paid for first two (2) hours of overtime Monday through Friday and the first eight (8) hours on Saturday. All other overtime hours Monday through Saturday shall be paid at double (2) time rate. Double (2) time shall be paid for all time on Sunday and recognized holidays or the days observed in lieu of these holidays.

NO. 15: Means the regular working day shall be scheduled to consist of at least eight (8) hours, but no more than ten (10) consecutive hours, exclusive of the lunch period. The regular working day may be scheduled to commence at any time between the hours of 5:00 a.m. and 10:00 a.m. All work performed in excess of forty (40) hours in one work week, or in excess of ten (10) hours in one work day shall be paid at the rate of one and one-half (1 1/2) times the regular hourly wage scale. Any work performed on a Saturday shall be paid for at the rate of one and one-half (1 1/2) times the regular hourly wage scale unless such Saturday work falls under the category of Saturday Make-Up Day. Any work performed by Employees anywhere on Sunday or recognized holidays, shall be paid for at the rate of double (2) time the regular wage scale. If, during the course of a work week, an Employee is unable to work for any reason, and, as a result, that Employee has not accumulated forty (40) hours of compensable time at the straight time rate, the Employer, at his option may offer the Employee the opportunity to work on Saturday at straight time; provided, however, if during the period worked by said Employee on Saturday, the Employee's compensable time at the straight time rate exceeds forty (40) hours, all time worked in excess of the forty (40) hours will be paid at the rate of one and one-half (1 1/2) times the regular hourly wage scale.

NO. 22: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

**JEFFERSON COUNTY
BUILDING CONSTRUCTION - OVERTIME SCHEDULE**

NO. 26: Means that the regular working day shall consist of eight (8) hours worked between 6:00 a.m., and 5:00 p.m., five (5) days per week, Monday to Friday, inclusive. Hours of work at each jobsite shall be those established by the general contractor and worked by the majority of trades. (The above working hours may be changed by mutual agreement). Work performed on Construction Work on Saturdays, Sundays and before and after the regular working day on Monday to Friday, inclusive, shall be classified as overtime, and paid for at double (2) the rate of single time. The employer may establish hours worked on a jobsite for a four (4) ten (10) hour day work week at straight time pay for construction work; the regular working day shall consist of ten (10) hours worked consecutively, between 6:00 a.m. and 6:00 p.m., four (4) days per week, Monday to Thursday, inclusive. Any work performed on Friday, Saturday, Sunday and holidays, and before and after the regular working day on Monday to Thursday where a four (4) ten (10) hour day workweek has been established, will be paid at two times (2) the single time rate of pay. The rate of pay for all work performed on holidays shall be at two times (2) the single time rate of pay.

NO. 32: The regular working day shall consist of eight (8) hours of labor on the job between six (6) a.m. and four (4) p.m. and the regular working week shall consist of five (5) consecutive eight (8) hour day's of labor on the job beginning with Monday and ending with Friday of each week. The normal work week is 40 hours. All full-time or part-time labor performed during such hours shall be recognized as regular working hours and paid for at the regular hourly rate. All work performed during regular work hours on Saturdays will be paid at time and one-half (1 1/2). All work performed outside of regular working hours and performed during the regular work week, shall be at double (2) times the regular rate, except that the first two (2) hours following the regular work day shall be paid at one and one-half (1 1/2) times the regular rate. An early starting time of 6:00 a.m. may be used mutually agreed upon by the interested parties. SHIFT RATE: Shift work would start after 4:00 p.m. to 6:00 a.m. The first 8 hours would be at 115% of the basic wage rate. Overtime Monday through Friday would be at 1 1/2 of base shift rate. Saturday regular work day hours – 1 1/2 of base shift rate. Saturday – work after 8 hours – 2 times the basic wage rate. Sunday and Holidays – 2 times the basic wage rate. All work performed on recognized holidays and Sundays shall be paid double (2) time. Appropriate overtime rates to be based on fifteen minute increments.

NO. 35: Means a regular work week of forty (40) hours, will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof maybe worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A work day is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time maybe advanced or delayed if mutually agreed to by the interested parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 43: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1 1/2) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1 1/2) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Work performed outside the regularly scheduled working hours and on Saturdays, Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

NO. 44: Means forty (40) hours shall constitute a work week, Monday through Friday. Eight (8) hours shall constitute a work day. Hours of work shall be between the hours of 7:00 a.m. and 4:30 p.m. All work performed before 7:00 a.m. and after 4:30 p.m. and all work performed in excess of eight (8) hours in any one work day, over forty (40) hours in any work week and the first eight (8) hours of work on Saturday, shall be paid at the rate of one and one-half (1 1/2) times the regular rate of pay. All hours worked in excess of eight (8) hours on Saturday, all hours worked on Sunday and on holidays, or days that may be celebrated as such, and as designated by the federal government, shall be paid at two (2) times the regular rate of pay. All shifts for work performed between the hours of 4:30 p.m. and 1:00 a.m. shall receive eight (8) hours pay at the regular hourly rate of pay plus two dollars (\$2.00) per clock hour. All work performed between the hours of 12:30 a.m. and 9:00 a.m. on a third shift shall receive eight (8) hours pay at the regular hourly rate plus four dollars (\$4.00) per clock hour. All overtime work required after the completion of a regular shift shall be paid at one and one-half times (1 1/2 x) the "shift" hourly rate.

**JEFFERSON COUNTY
BUILDING CONSTRUCTION - OVERTIME SCHEDULE**

NO. 55: Means the regular work day shall be eight (8) hours between 6:00 a.m. and 4:30 p.m. The first two (2) hours of work performed in excess of the eight (8) hour work day, Monday through Friday, and the first ten (10) hours of work on Saturday, shall be paid at one & one-half (1½) times the straight time rate. All work performed on Sunday, observed holidays and in excess of ten (10) hours a day, Monday through Saturday, shall be paid at double (2) the straight time rate.

NO. 66: Means eight (8) hours shall constitute a day's work beginning at 7:00 a.m. (or 8:00) A.M. and ending at 3:30 (or 4:30) P.M. The work week shall be forty (40) hours beginning Monday at 7:00 a.m. (or 8:00) A.M. and ending Friday at 3:30 (or 4:30) P.M. The Employer at his option may use a flexible starting time between the hours of 6:00 a.m. and 8:00 a.m. All overtime, that is worked outside of the above established working hours of Monday through Friday, shall be paid at double (2) time, including Saturdays, Sundays and Holidays.

NO. 67: Means eight (8) hours shall constitute a day's work, with a flexible starting time to begin between 6:00 a.m. to 8:00 a.m., five (5) days a week, Monday through Friday. Any work over eight (8) hours in any one day shall be at the overtime rate, which is time & one-half (1½). Any work on Saturday shall be at time & one-half (1½), unless a Make-Up Day due to inclement weather is in effect. Any work on Sundays or holidays shall be at double (2) time. Four (4) days, ten (10) hours each day to be worked during Monday through Friday, shall be paid at straight time. A Make-Up Day Due To Inclement Weather Only - Employee(s) will be permitted to work an eight (8) hour make-up day on Saturday only, and the employee will receive the regular straight time wage rate.

NO. 72: Means that except as is otherwise provided herein, the work week shall be determined to begin at 8:00 a.m. Wednesday and end at 4:30 p.m. on the following Tuesday. Except as herein provided, working hours are from 8:00 a.m. to 11:55 a.m. and 12:30 p.m. to 4:25 p.m. and no more than the regular hours shall be worked during the forenoon or afternoon at the regular rate. In the case of days of inclement weather starting time and quitting time may be adjusted so long as the hours worked on such days do not exceed eight (8) and do not extend beyond 4:30 p.m. In circumstances where the Employee or Employees have regularly been working overtime on a particular day or days, no adjustment in the starting time shall operate to deprive Employees of overtime pay, which they would have otherwise received but for the change in the starting time. The parties understand that the application of the provisions of the preceding sentence will result in Employees receiving overtime pay even where they have not worked more than with (8) hours on a particular day. Regardless of the starting time, the forenoon working hours shall end at 11:55 a.m. and the afternoon working hours shall begin at 12:30 p.m. and end 8 hours and 25 minutes after the starting time fixed by the Employer for forenoon hours. Work performed by an employee on a non-holiday Saturday, except as hereinafter provided, or at night or before or after regular working hours on a non-holiday weekday, shall be considered overtime work, for which Employees working during such time shall be paid at the rate of one and one-half (1½) times their regular hourly wage rate for each hour or fraction thereof, worked during such time. Work performed on a Sunday or the recognized holidays shall be considered overtime work for which the Employee shall be paid twice the amount of his or her regular hourly wage rate for each hour or fraction thereof worked on any such day.

JEFFERSON COUNTY BUILDING CONSTRUCTION - OVERTIME SCHEDULE

NO. 73: Means eight (8) hours shall constitute a day's work to begin at 8:00 a.m. and end at 4:30 p.m. The starting time may be advanced one (1) or two (2) hours. Employees shall receive time and one-half (1½) for all time they are required to work before 8:00 a.m., during the lunch period or after 4:30 p.m. unless the starting time is advanced as provided above. Forty (40) hours shall constitute a week's work, Monday through Friday, or any part thereof by reason of inclement weather (rain or mud), Saturday or any part thereof may be worked as a make-up day at the straight time rate. The Employer shall have the option of working five (5) eight (8) hour day's or four (4) ten (10) hour day's Monday through Friday. If an Employer elects to work five (5) eight (8) hour days during any work week, hours worked more than eight (8) per day or forty (40) per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an employer elects to work four (4) ten (10) hour days in any week, work performed more than ten (10) hours per day or forty (40) hours per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an Employer is working ten (10) hour days and loses a day due to inclement weather, he may work ten (10) hours Friday at straight time. All time over the regular workday as defined and all hours worked on Saturday shall be paid at the rate of one and one-half (1½) the regular rate of wages. If workmen are required to work recognized holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work. If a laborer is assisting another craft on a make-up day and the other craft is receiving overtime pay the laborer shall receive the same overtime multiple as the craft assisted. No overtime rates shall be broken down into less than thirty (30) minute units of time. Projects that cannot be performed during regular workday: Building construction work, if required by the owner, the contractor may perform work outside the normal hours and employees shall be paid applicable straight time hourly wage rate plus a premium of \$1.50 per hour for the first eight hours worked. Any hours worked in excess of eight hours shall be paid at the applicable overtime rate plus \$1.50 per hour premium. Shift work: The Employer may elect to work, one, two or three shifts on any work. When two or more shifts are worked on any operation, the first shift or day shift shall consist of eight (8) hours exclusive of lunch time; the second or swing shift consist of eight (8) hours' work for eight and one-half hours pay, exclusive of lunch time; the third or graveyard shift shall consist of eight (8) hours' work for nine (9) hours' pay exclusive of lunch time. The swing shift shall be paid twenty-five cents (\$.25) per hour above the regular rate of pay. The graveyard shift shall be paid fifty cents (\$.50) per hour above the regular rate of pay. Multiple shift (second or third shift) operation will not be construed on the entire project if at any time it is deemed advisable and necessary for the employer to a specific operation. However, no shift shall be started between midnight and 6:00 a.m. except the graveyard shift on a three (3) shift operation, or except in unusual or emergency, regardless if the project is working one (1) or two (2) shift. Shifts shall be established for a minimum of three (3) consecutive workdays. When 2-10 or 12 hour shifts are worked, the second shift shall receive \$.50 per hour above regular rate of pay. When the employer elects to work 2-10 or 12 hour shifts, the first 8 hours shall be at straight time rates. The remaining 2 or 4 hours shall be at the overtime rate of time and one-half.

NO. 76: Means the standard workday shall consist of eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. with a thirty (30) minute unpaid lunch hour occurring in the middle of the shift. The standard workweek shall consist of five standard workdays commencing on Monday and ending on Friday. The normal starting and quitting times may be changed by mutual consent of interested parties. All time worked before and after the established eight (8) hour workday, Monday through Friday, and all time worked on Saturday, shall be paid for at the rate of time & one-half (1½) the hourly base wage rate in effect. All time worked on Sunday and holidays shall be paid at the rate of double (2) the hourly wage in effect. All work done on Saturday will be done at time & one-half (1½), unless Saturday shall be used as a make-up day. If an employee should lose one or more days in a work week and use Saturday as a make-up day the pay shall be at the regular hourly base wage rate and benefits.

NO. 77: Means the regular workday shall consist of eight (8) consecutive hours, exclusive of a thirty (30) minute lunch period, with pay at the regular straight time hourly rate. The regular workday shall begin on the job site between the hours of 6:00 a.m. and 8:00 a.m. with the starting time to be determined by the Employer, unless project owner requires different starting time. This adjustable starting time can, at the Employer's option, be staggered to permit starting portions of the work force at various times within the prescribed hours. The Employer may establish a four (4) ten (10) hour shift exclusive of the thirty (30) minute lunch period at the straight time wage rate. Forty (40) hours per week shall constitute a week's work Monday through Thursday. In the event a job is down due to weather conditions, safety or other conditions beyond the control of the Employer, then Friday may, at the option of the employer, be worked as a make-up day at the straight time wage rate. Straight time is not to exceed ten (10) hours a day or forty (40) hours per week. Time and one-half (1½) shall be paid for all overtime hours worked during the week, Monday through Friday and for all work performed on Saturday. Double (2) time shall be paid for all time worked on Sunday and recognized holidays.

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BUILDING CONSTRUCTION - OVERTIME SCHEDULE**

NO. 80: Means eight (8) hours shall constitute the regular work day and forty (40) hours a work week, Monday through Friday. The Employer shall establish the starting time between 6:30 a.m. through 9:00 a.m. An Employer may further adjust the starting time up to 9:30 a.m. throughout the year. Time and one-half (1½) shall be paid after eight (8) consecutive hours worked after the established starting time and for hours worked before the established starting time. Time and one-half (1½) shall be paid for work performed on Saturdays. Work performed on Sundays and Holidays shall be paid at the double (2) time rate of pay. The Employer when working on Highway and Road Work may have the option to schedule the work week for his paving crew only from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate of time and one-half (1½). If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather (rain, snow, sleet falling), the Employer shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours.

NO. 82: Means the work day shall consist of eight (8) hours worked between 7:00 a.m. and 4:30 p.m. Forty (40) hours will constitute the work week from Monday through Friday, inclusive. Up to four (4) hours of overtime work per day performed before or after the assigned normal work day, (twelve (12) continuous hours, starting no earlier than 6:00 a.m., Monday through Friday), shall be paid at a rate of one and one-half times (1.5x) that employee's hourly rate. Any additional overtime, Monday through Friday, shall be paid at two times (2x) the regular rate of pay. The first eight hours of overtime work on Saturday shall be paid at the rate of one and one-half times (1.5x) the regular rate of pay. Hours worked in excess of eight (8) hours on Saturday shall be paid at two times (2x) the regular rate of pay. Double time shall be paid for work performed on Sundays, recognized legal holidays or days that may be celebrated as such as designated by the federal government. All shifts for work performed between the hours of 4:30 p.m. and 1:00 a.m. shall be paid at the regular hourly rate plus two dollars (\$2.00) per clock hour. All shifts for work performed between the hours of 12:30 a.m. and 9:00 a.m. shall be paid at the regular hour rate plus four dollars (\$4.00) per clock hour. All overtime work required after the completion of a regular shift shall be paid at one and one-half times (1.5x) the "shift" hourly rate.

NO. 87: Means eight (8) hours starting between 6:00 a.m. and 8:00 a.m. and ending between 2:30 p.m. and 4:30 p.m. at the Employers discretion shall constitute a day's work. Any work prior to 6:00 a.m. or after eight (8) hours shall be paid at the overtime rate. Five (5) days from Monday through Friday inclusive shall constitute a regular work week. All hours before and after these regular hours shall be considered overtime and shall be paid for at the rate of double (2) time. All work on Saturday and Sunday shall be paid at double (2) the prevailing scale of wages.

NO. 91: Means eight (8) hours shall constitute a day's work commencing at 7:00 a.m. and ending at 3:30 p.m., allowing one-half (½) hour for lunch. The option exists for the Employer to use a flexible starting time between the hours of 6:00 a.m. and 9:00 a.m. The regular workweek shall consist of forty (40) hours of five (5) workdays, Monday through Friday. The workweek may consist of four (4) ten (10) hour days from Monday through Thursday, with Friday as a make-up day. If the make-up day is a holiday, the employee shall be paid at the double (2) time rate. The employees shall be paid time and one-half (1½) for work performed on Saturdays, before the regular starting time or after the regular quitting time or over eight (8) hours per work day (unless working a 10-hour work day, then time and one-half (1½) is paid for work performed over ten (10) hours a day) or over forty (40) hours per work week. Work performed on Sundays and recognized holidays shall be paid at the double (2) time rate of pay. SHIFT WORK: When it is necessary for the project to operate in shifts, there will be three (3) eight (8) hour shifts commencing at 8:00 a.m. Shift work must continue for a period of not less than three (3) consecutive work days, two (2) days which must be regular work days (Monday through Friday). In the event the second or third shift of any regular work day shall fall into a Saturday or a holiday, such extension into a Saturday or holiday shall be considered as part of the previous workday and employees shall be paid at the regular shift rate. The first day shift shall work a regular eight (8) hour day at regular rates. The second shift shall be eight (8) hours regular time pay plus \$2.50 per hour premium for eight (8) hours work. Third shift will be for eight (8) hours regular time pay plus \$3.00 per hour premium for eight (8) hours work.

NO. 92: Means all work performed from 8:00 a.m. to 4:30 p.m., Monday through Friday, will be at straight time pay up to forty (40) hours per week. All work performed Monday through Friday before 8:00 a.m. and after 4:30 p.m. will be done at time and one-half (1½). All work done on Saturday will be done at time and one-half (1½), unless the employer and employee agree that Saturday shall be used as a make-up day. The Employer may use a flexible starting time of 7:00 a.m. to 8:00 a.m., and quitting time of 3:30 p.m. to 4:30 p.m., and any such different work starting time shall determine whether wages are payable at the straight rate or the premium rate. All work performed on Saturday shall be paid for at time and one-half (1½), unless the Saturday has been used as a make-up day. All work performed on Sunday and holidays shall be paid for at the rate of double (2) time.

**JEFFERSON COUNTY
BUILDING CONSTRUCTION - OVERTIME SCHEDULE**

NO. 104: Means eight (8) hours per day shall constitute a standard work day between the hours of 6:00 a.m. and 8:00 p.m. The standard work week shall be forty (40) hours between 6:00 a.m. on Monday and ending 8:00 p.m. on Friday. An overtime rate of time and one-half (1½) the base hourly rate shall be paid on all hours in excess of eight (8) hours in a day Monday through Friday. Saturdays shall be considered overtime and work done on Saturday shall be paid at time and one-half (1½) the prevailing scale. Sundays and holidays shall be considered overtime and work done on these days shall be paid at double (2) the prevailing scale.

NO. 116: Means the standard work day shall consist of eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. The standard work week shall consist of five standard work days commencing on Monday and ending on Friday inclusive. All time worked before and after the established eight (8) hour work day, Monday through Friday, and all time worked on Saturdays, shall be paid for at the rate of time & one-half (1½) the hourly base wage rate in effect. All time worked on Sundays and recognized holidays shall be paid for at the rate of double (2) the hourly base wage rate in effect.

NO. 126: Means eight (8) hours per day shall constitute a day's work and forty (40) hours per week, Monday through Friday, shall constitute a week's work. The regular starting time shall be 8:00 a.m. If a second or third shift is used, the regular starting time of the second shift shall be 4:30 p.m. and the regular starting period for the third shift shall be 12:30 a.m. These times may be adjusted by the employer. The day shift shall work a regular eight (8) hours shift as outlined above. Employees working a second shift shall receive an additional \$0.25 above the regular hourly rate and perform seven and one-half (7½) hours work for eight (8) hours pay. Third shift employees shall be paid an additional \$0.50 above the regular hourly rate and work seven (7) hours for eight (8) hours pay. When circumstances warrant, the Employer may change the regular workweek to four (4) ten-hour days at the regular time rate of pay. All time worked before and after the established workday of eight (8) hours, Monday through Friday, and all time worked on Saturday shall be paid at the rate of time and one-half (1½) except in cases where work is part of an employee's regular Friday shift. All time worked on Sunday and recognized holidays shall be paid at the double (2) time rate of pay except in cases where work is part of an employee's previous day's shift. For all overtime hours worked \$27.96 of the fringe benefits portion of the prevailing wage shall be paid at the same overtime rate at which the cash portion of the prevailing wage is to be paid. The remaining \$1.24 of the fringe benefit portion of the prevailing wage may be paid at straight time.

JEFFERSON COUNTY HOLIDAY SCHEDULE – BUILDING CONSTRUCTION

NO. 3: All work done on New Year's Day, Decoration Day, July 4th, Labor Day, Veteran's Day, Thanksgiving and Christmas shall be compensated at the double (2) time rate of pay. When any of these holidays fall on a Sunday, the following Monday shall be observed.

NO. 5: All work that shall be done on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day shall be paid twice the amount of his or her regular hourly wage rate for each hour of fraction thereof worked on any such day.

NO. 6: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day and any additional holidays which may be mutually agreed upon. Whenever any such holiday falls on a Sunday, the following Monday shall be recognized and observed as the holiday. Work performed on Sundays and holidays shall be paid at the double time rate of pay. No work shall be performed on Labor Day.

NO. 7: The following days are assigned days and are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. If a holiday falls on a Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This is applied to protect Labor Day. When a holiday falls during the normal workweek, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week. However, no reimbursement for these eight (8) hours is to be paid to the workman unless worked. If workman are required to work the above enumerated holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work.

NO. 8: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day, or the days observed in lieu of these holidays, shall be paid at the double time rate of pay.

NO. 12: All work done on New Year's Day, Decoration Day, Independence Day, Veteran's Day, Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. Should any of these days fall on Sunday, then the following day shall be observed as the holiday. Under no circumstances shall employees be permitted to work on Labor Day.

NO. 18: All work done on New Year's Day, Memorial Day, July 4th, Labor Day, Veteran's Day, Thanksgiving Day, the Friday following Thanksgiving and Christmas Day shall be paid at the double time rate of pay. When one of the above holidays falls on Sunday, the following Monday shall be considered the holiday, and when one of the above holidays falls on Saturday, the preceding Friday shall be considered the holiday, and all work performed on said day(s) shall be paid at the double time rate.

NO. 25: All work done on New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving, Christmas Day, Presidential Election Day, or days locally observed as such, and Saturday and Sunday shall be recognized as holidays and shall be paid at the double (2) time rate of pay. If a named holiday falls on a Saturday, the holiday will be observed on the preceding Friday. When a named holiday falls on Sunday, the Monday after will be observed as the holiday. Appropriate overtime rates to be based on fifteen minute increments.

NO. 26: All work done on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. When a Holiday occurs on Saturday it shall not be observed on either the previous Friday or the following Monday. Such days shall be regular work days. If such a holiday occurs on Sunday it shall be observed on the following Monday.

NO. 31: All work done on New Year's Day, Presidents Day, Good Friday, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, and Employee's Birthday shall be paid at the double time rate of pay. If a holiday falls on Sunday, the following Monday will be observed as the recognized holiday. If a holiday falls on Saturday, the preceding Friday will be observed as the recognized holiday.

**JEFFERSON COUNTY
HOLIDAY SCHEDULE – BUILDING CONSTRUCTION**

NO. 36: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workman unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make-up day when an observed holiday occurs during the work week. Employees have the option to work that shall receive double (2) the regular rate of pay for such work.

NO. 41: The following days shall be observed as legal holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. No work shall be performed on the Fourth of July, Labor Day or Christmas Day. Any work performed on the above holidays shall be paid for at two (2) times the regular straight time rate of pay. When any of the above holidays fall on Sunday, the following Monday shall be observed as such holiday. If a holiday falls on Saturday, it shall not be considered to be observed on the previous Friday or following Monday. Such days shall be regular workdays.

NO. 45: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving, the day before Christmas, and Christmas Day, shall be paid at the double time rate of pay.

NO. 47: The following holidays are recognized: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day. When a holiday listed above falls on Saturday, it shall be celebrated on the Friday preceding the holiday. When a holiday falls on Sunday, the following Monday shall be observed. Holidays referred to above shall be paid for at the double (2) time rate of pay when worked.

NO. 51: All time worked on Sundays and recognized holidays shall be paid for at the rate of double (2) the hourly base wage rate in effect. The Employer agrees to recognize the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. If the holiday falls on Sunday, it shall be recognized on the following Monday. If the holiday falls on a Saturday, it shall be recognized as a Saturday only holiday.

NO. 54: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay. When a holiday falls on Saturday, it shall be observed on Friday. When a holiday falls on Sunday, it shall be observed on Monday.

NO. 55: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that shall receive double (2) the regular rate of pay for such work.

NO. 60: All work performed on New Year's Day, Armistice Day (Veteran's Day), Decoration Day (Memorial Day), Independence Day (Fourth of July), Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. No work shall be performed on Labor Day except when triple (3) time is paid. When a holiday falls on Saturday, Friday will be observed as the holiday. When a holiday falls on Sunday, the following Monday shall be observed as the holiday.

**JEFFERSON COUNTY
HOLIDAY SCHEDULE – BUILDING CONSTRUCTION**

NO. 66: All work performed on Sundays and the following recognized holidays, or the days observed as such, of New Year's Day, Decoration Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Whenever any such holidays fall on a Sunday, the following Monday shall be observed as a holiday.

NO. 69: All work performed on New Year's Day, Memorial Day, July Fourth, Labor Day, Veteran's Day, Thanksgiving Day or Christmas Day shall be compensated at double (2) their straight-time hourly rate of pay. Friday after Thanksgiving and the day before Christmas are also holidays, however, if the employer chooses to work the normal work hours on these days, the employee will be paid at straight -time rate of pay. If a holiday falls on a Saturday, the holiday will be observed on Saturday; if a holiday falls on a Sunday, the holiday will be observed on the following Monday.

NO. 71: All work performed on the following recognized holidays, or days that may be celebrated as such, shall be paid at the double (2) time rate of pay: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving and Christmas Day. If a holiday falls on Sunday, it shall be celebrated on Monday. If a holiday falls on Saturday, it shall be celebrated on the Friday proceeding such Saturday.

NO. 73: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day (or mutually agreed date of the Friday after Thanksgiving Day may be substituted for Veteran's Day), Thanksgiving Day and Christmas Day, or in the event that any of said Holidays falls on Sunday, then the day or days generally recognized as such. Any work performed anywhere on any of the aforesaid Holidays, or on the day or days recognized and observed as such, shall be paid for at double (2) time the regular hourly rate.

OCCUPATIONAL TITLE	* Date of Increase	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Carpenter	6/16	\$36.21	23	16	\$16.10
Cement Mason	6/16	\$31.16	17	11	\$17.95
Electrician (Outside-Line Construction\Lineman)	9/16	\$43.75	9	12	\$5.25 + 36%
Lineman Operator	9/16	\$37.73	9	12	\$5.25 + 36%
Lineman - Tree Trimmer		\$25.24	32	31	\$10.20 + 3%
Groundman	9/16	\$29.11	9	12	\$5.25 + 36%
Groundman - Tree Trimmer		\$20.00	32	31	\$7.89 + 3%
Laborer					
General Laborer	6/16	\$29.76	2	4	\$13.17
Skilled Laborer	6/16	\$30.36	2	4	\$13.17
Millwright	6/16	\$36.21	23	16	\$16.10
Operating Engineer					
Group I	6/16	\$32.41	10	9	\$25.13
Group II	6/16	\$32.41	10	9	\$25.13
Group III	6/16	\$31.11	10	9	\$25.13
Group IV	6/16	\$27.65	10	9	\$25.13
Oiler-Driver	6/16	\$28.11	10	9	\$25.13
Pile Driver	6/16	\$36.21	23	16	\$16.10
Traffic Control Service Driver		\$28.775	26	25	\$9.045
Truck Driver-Teamster		\$30.41	25	21	\$10.82

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate sheet.

REPLACEMENT PAGE
JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 1/2) shall be paid for all work in excess of forty (40) hours per work week.

NO. 2: Means a regular workweek shall be forty (40) hours and will start on Monday and end on Friday. The Employer shall have the option of working five 8-hour days or four 10-hour days Monday through Friday. If an Employer elects to work five 8-hour days during any workweek, hours worked more than eight (8) per day or 40 per week shall be paid at time and one-half the hourly rate Monday through Friday. If an Employer elects to work four 10-hour days in a week, work performed more than ten (10) hours per day or 40 hours per week shall be paid at time and one-half the hourly rate Monday through Friday. When working a five 8-hour day schedule and an Employer is prevented from working forty (40) hours Monday through Friday, or any part thereof, by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. If an Employer is working a four 10-hour day schedule and loses a day due to inclement weather, he may work 10 hours Friday at straight time. All hours worked over the 40 hours Monday through Friday will be paid at 1 1/2 overtime rate. A workday shift is to begin at the option of the Employer, between 6:00 a.m. and not later than 9:00 a.m. However, the project starting time may be advanced or delayed if required. If workmen are required to work the enumerated holidays or days observed as such or Sundays, they shall receive double (2) the regular rate of pay for such work. Overtime shall be computed at one-half (1/2) hour intervals. Shift: The Contractor may elect to work one, two or three shifts on any work. When operating on more than one shift, the shifts shall be known as the day shift, swing shift, and graveyard shift as such terms are recognized in the industry. When two shifts are worked on any operation, the shifts will consist of eight (8) or ten (10) hours exclusive of lunchtime. When three shifts are worked the first day or day shift will consist of eight (8) hours exclusive of lunchtime. The second or swing shift shall consist of seven and one-half (7 1/2) hours work for eight hours pay, exclusive of lunchtime, and the third or the graveyard shift shall consist of seven (7) hours work for eight (8) hours pay, exclusive of the lunchtime. All time in excess of normal shifts shall be considered overtime. Multiple shift (the two or three shift) operation will not be construed on the entire project if at anytime it is deemed advisable and necessary for the Employer to multiple shift a specific operation. However, no shift shall be started between midnight and six a.m. except the graveyard shift on a three-shift operation, or except in an unusual or emergency situation. If an Employer starts a shift between midnight and 6 a.m. except the graveyard shift on a three-shift operation, he shall reimburse all employees for the entire shift at the double time rate. Completion of the second shift on a two-shift operation or completion of the graveyard shift on a three-shift operation that carries over into Saturday morning, shall be at the straight time rate. Overtime shall be computed at 1/2 hour intervals.

NO. 9: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1 1/2) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1 1/2) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Work performed in the first eight (8) hours on Saturday shall be paid at the rate of one and eight tenths (1.8) the regular straight time rate. Work performed outside these hours and on Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

REPLACEMENT PAGE
JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION

NO. 10: Means the regular workday for which employees shall be compensated at straight time hourly rate of pay shall, unless otherwise provided for, begin at 8:00 a.m. and end at 4:30 p.m. The regular workweek shall consist of five (5) days, Monday through Friday, beginning at 8:00 a.m. and ending at 4:30 p.m. except as may be modified. The starting time may be either advanced or delayed one hour or two hours at the discretion of the Employer. The Employer may have the option to schedule his work week from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate. If the Employer elects to work Monday through Thursday and is stopped due to inclement weather, holidays or other conditions beyond the control of the Employer, he shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hour workweek. All necessary overtime and work performed on Saturday, shall be paid at time and one-half (1½) the hourly rate, plus an amount equal to one-half (½) of the hourly Total Indicated Fringe Benefits. All work performed on Sundays and recognized holidays shall be paid at double (2) the hourly rate, plus an amount equal to the hourly Total Indicated Fringe Benefits. Shifts may be established when considered necessary by the Employer. Shift hours and rates will be as follows. If shifts are established, work on the First Shift will begin between 6:00 a.m. and 9:00 a.m. and consist of eight (8) hours of work plus one-half hour unpaid lunch. Hours worked during the first shift will be paid at the straight time rate of pay. The second shift shall start eight hours after the start of the first shift and consist of eight (8) hours of work plus one-half hour unpaid lunch. Work on the second shift will begin between 2:00 p.m. and 5:00 p.m. and be paid the straight time rate plus \$2.50 per hour. The third shift shall start eight hours after the start of the second shift and consist of eight (8) hours plus one-half hour unpaid lunch. Work on the third shift will begin between 10:00 p.m. and 1:00 a.m. and be paid the straight time rate plus \$3.50 per hour. The additional amounts that are to be paid are only applicable when working shifts. Shifts that begin on Saturday morning through those shifts which end on Sunday morning will be paid at time and one-half these rates. Shifts that begin on Sunday morning through those shifts which end on Monday morning will be paid at double time these rates.

NO. 17: Means eight (8) hours shall constitute the regular work day and forty (40) hours a work week, Monday through Friday. The Employer shall establish the starting time between 6:30 a.m. through 9:00 a.m. An Employer may further adjust the starting time up to 9:30 A.M. throughout the year. Time and one-half (1½) shall be paid after eight (8) consecutive hours worked after the established starting time and for hours worked before the established starting time. Time and one-half (1½) shall be paid for work performed on Saturdays. Work performed on Sundays and Holidays shall be paid at the double (2) time rate of pay. The Employer when working on Highway and Road Work may have the option to schedule the work week for his paving crew only from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate of time and one-half (1½). If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather (rain, snow, sleet falling), the Employer shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours.

NO. 23: Means the regular workweek shall start on Monday and end on Friday, except where the Employer elects to work Monday through Thursday, (10) hours per day. All work over ten (10) hours in a day or forty (40) hours in a week shall be at the overtime rate of one and one-half (1½) times the regular hourly rate. The regular workday shall be either eight (8) or ten (10) hours. If a job can't work forty (40) hours Monday through Friday because of inclement weather or other conditions beyond the control of the Employer, Friday or Saturday may be worked as a make-up day at straight time (if working 4-10's). Saturday may be worked as a make-up day at straight time (if working 5-8's). An Employer, who is working a four (4) ten (10) hour day work schedule may use Friday as a make-up day when a workday is lost due to a holiday. A workday is to begin at the option of the Employer but not later than 11:00 a.m. except when inclement weather, requirements of the owner or other conditions beyond the reasonable control of the Employer prevent work. Except as worked as a make-up day, time on Saturday shall be worked at one and one-half (1½) times the regular rate. Work performed on Sunday shall be paid at two (2) times the regular rate. Work performed on recognized holidays or days observed as such, shall also be paid at the double (2) time rate of pay. For all overtime hours worked during the week or on Saturday \$15.55 of the fringe benefits portion of the prevailing wage shall be paid at time and one-half (1½). For all overtime hours worked on Sundays or recognized holidays \$15.55 of the fringe benefits portion of the prevailing wage shall be paid double time. The remaining \$.55 of the fringe benefit portion of the prevailing wage shall be paid at straight time.

REPLACEMENT PAGE
JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION

NO. 25: Means a regular work week of forty (40) hours, starting on Monday and ending on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof maybe worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A work day is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time maybe advanced or delayed if mutually agreed to by the interest parties. All hours worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 26: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 32: Means the overtime rate shall be time and one-half the regular rate for work over forty (40) hours per week. Sundays and Holidays shall be paid at double the straight time rate.

**JEFFERSON COUNTY
HOLIDAY SCHEDULE – HEAVY CONSTRUCTION**

NO. 4: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, or observed as such, shall be paid at the double time rate of pay. When a Holiday falls on a Sunday, Monday shall be observed. No work shall be performed on Labor Day, except in case of jeopardy to life or property. This is applied to protect Labor Day.

NO. 9: All work performed on Sundays and the following recognized holidays, or the days observed as such, of New Year's Day, Decoration Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Whenever any such holidays fall on a Sunday, the following Monday shall be observed as a holiday.

NO. 11: Means all work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, and any additional holidays which may be mutually agreed upon shall be paid at the double (2) time rate of pay. Whenever any such holiday falls on a Sunday, the following Monday shall be recognized and observed as the holiday. No work shall be performed on Labor Day.

NO. 12: All work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, or days celebrated as such, shall be paid at the double time rate of pay. When one of the foregoing holidays falls on Sunday, it shall be celebrated on the following Monday. When one of the foregoing holidays falls on Saturday, it shall be celebrated on the Friday before the holiday.

NO. 16: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on Sunday, it shall be observed on the following Monday. If a holiday falls on Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid to the worker unless worked. If workers are required to work the above recognized holidays or days observed as such, they shall receive double (2) the regular rate of pay for such work.

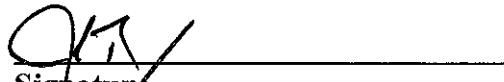
NO. 21: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workman unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make-up day when an observed holiday occurs during the work week. Employees have the option to work that make-up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 25: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

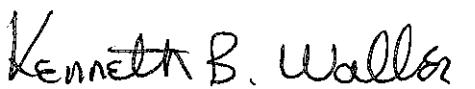
NO. 31: All work performed on New Year's Day, Presidents' Day, Veterans' Day, Good Friday, Decoration Day, Fourth of July, Labor Day, Christmas Eve Day, Christmas Day, Thanksgiving Day and Day after Thanksgiving or days celebrated for the same.

In Witness thereof, the parties hereto have executed this Agreement, in triplicate, as of this 6 day of December 2016:

Boyer Bldg & Design, Inc
Company Name

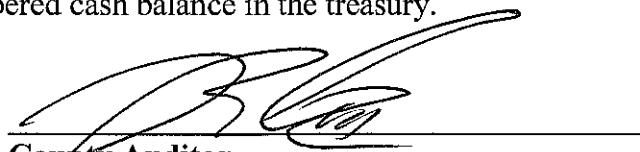

Signature
Joshua Boyer
Print

County of Jefferson, State of Missouri

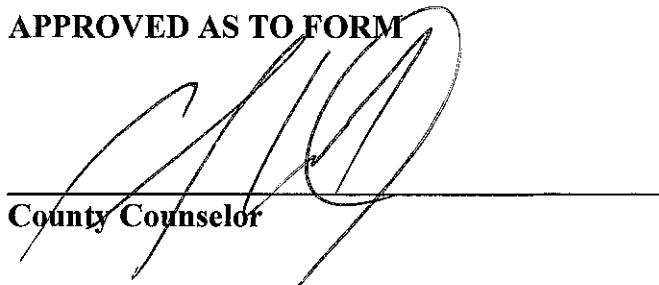

Kenneth B. Waller
Kenneth B. Waller County Executive

Company Address: _____
1701 Towne View Dr
DeSoto, MO 63020
Phone: 636-337-9119

I hereby certify under section 50.660 RSMo there is either: (1) a balance of funds, otherwise unencumbered, to the credit of the appropriation to which the obligation contained herein is chargeable, and a cash balance otherwise unencumbered, in the treasury, to the credit of the funds from which payment is to be made, each sufficient to meet the obligation contained herein; or (2) bonds or taxes have been authorized by vote of the people and there is a sufficient unencumbered amount of the bonds yet to be sold or of the taxes levied and yet to be collected to meet the obligation in case there is not a sufficient unencumbered cash balance in the treasury.


County Auditor

APPROVED AS TO FORM


County Counselor

COOPERATIVE BID FORM

Bid Name: Jail Shower Renovations

INSTRUCTIONS: Bidders **MUST** fill out this form as part of the bidding process and attach to your bid response to Jefferson County, Missouri.

COOPERATIVE PROCUREMENT CONTRACT

This is a cooperating supply contract in accordance with Chapter 130, Section 130.020. K.3., of the Procurement Policy and Procedures, Jefferson County Code of Ordinances.

Will you extend bid prices, cash terms, and all other terms and conditions of any contract resulting from this bid with Jefferson County, Missouri, to any Jefferson County, Missouri, Municipality, government agency, district, sub-district or other tax-supported entity?

Yes No X

Although agreeing to the extension of the terms of this contract to municipalities or other tax-supported entities, **is not a prerequisite for award**, Jefferson County, Missouri, may take this factor into consideration if tie bids are received, in addition to the normal Terms and Conditions of the Invitation for Bid, enclosed here with as a part of this bid.

Bidders are encouraged to extend contract prices to Municipalities and any other tax-supported entities.

If agreeable to the above, state the **minimum** dollar value *per order* you will require from a Municipality or any other tax-supported entity (this shall not apply to Jefferson County, Missouri Government, Departments or Divisions):

MINIMUM DOLLAR VALUE PER ORDER: \$ NA

BY: JB

TITLE: President

COMPANY: Boyer Bldg & Design, Inc

CONTACT INFORMATION FOR COOPERATIVE AGREEMENT

Phone 636-337-9119 E-mail boyerbldg@att.net

THIS FORM WILL BECOME PART OF THE BID DOCUMENT PACKAGE SUBMITTED TO JEFFERSON COUNTY, MISSOURI



JEFFERSON COUNTY
DEPARTMENT OF ADMINISTRATIVE SERVICES
729 MAPLE ST / PO BOX 100
HILLSBORO MO 63050
WWW.JEFFCOMO.ORG

ADDENDUM #1:

Invitation for Bid: **REBID COUNTY JAIL SHOWER
RENOVATIONS** **Addendum** **11-29-2016**
Date Issued:

ORIGINAL INVITATION FOR BID NOTICE ISSUED: **NOVEMBER 8, 2016**

BIDS SHALL BE ACCEPTED UNTIL: **TUESDAY, DECEMBER 6, 2016** AT 2:00 P.M. LOCAL TIME.

Specification	JASON JONAS
Contact:	Department of Public Works 636-797-5369 jjonas@jeffcomo.org
Contract	VICKIE PRATT
Contact:	Department of Administrative Services 636-797-5380

**Mail (3) Three
Complete Copies
With Vendor And
Bid Information As
Shown In Sample:**

SAMPLE ENVELOPE	
<i>VENDOR NAME</i>	
<i>VENDOR ADDRESS</i>	
<i>CONTACT NUMBER</i>	DEPARTMENT OF THE COUNTY CLERK
	JEFFERSON COUNTY MISSOURI
	729 MAPLE ST / PO BOX 100
	HILLSBORO MO 63050-0100
<i>SEALED BID: (BID NAME)</i>	

Contract Term:
**UPON APPROVAL OF THE
COUNTY COUNCIL AND
COUNTY EXECUTIVE**

The undersigned certifies that he/she has the authority to bind this company in an agreement/contract to supply the commodity or service in accordance with all terms, conditions, and pricing specified. Prices are firm during this agreement term, unless agreed upon in writing by the County. The County has the option to renew this agreement at the same terms and conditions as the original agreement for one additional one-year term with the written consent of the successful bidder. Price increases for renewals are not authorized unless approved in writing by the County.

**Vendor
Information:**

Boyer Bldg & Design, Inc	Joshua Boyer
Company Name	Authorized Agent (Print)
1701 Towne View Dr	<i>JB</i>
Address	Signature
DeSoto, MO 63020	President
City/State/Zip Code	Title
636-337-9119	12/6/2016
Telephone #	81-3952466
boyerbldg@att.net	Date
E-mail	Tax ID #
	63.6-586-9810
	Fax #

ADDENDUM #1:

THE INVITATION FOR BID FOR REBID COUNTY JAIL SHOWER RENOVATIONS BID
SPECIFICATIONS HAS BEEN REVISED.

Addendum 1

BID DEPOSIT

The following addendum is required for the IFB – Rebid County Jail Shower Renovations

1) **Bid Guaranty:** The bidder shall submit a Bid Guaranty. The project bid bond form is attached. The bidder shall mark the box below to identify the type of Bid Guaranty.

Paper Bid Bond
 Cashier's Check

Bid Guaranty shall be made payable to the Owner, in the amount of five percent of the Bidder's maximum Bid price and in the form of a certified or bank check or a Bid Bond (on form attached, if a form is prescribed) issued by a Surety.

The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security within 15 days of the Notice of Award. Failure to do so may result in the annulment of the Notice of Award and forfeiture of the Bid Security. The Bid Security of any Bidder whom the Owner believes to have a reasonable chance of receiving the award, may be retained by the Owner until the earlier of the seventh day after the "effective date of the Agreement" (which is the date when the agreement has been executed by all parties) by Owner to Contractor and the required Contract Security is furnished or the sixty-first day after the Bid opening. Bid Security of other Bidders will be returned within seven days of the Bid opening.

BID BOND

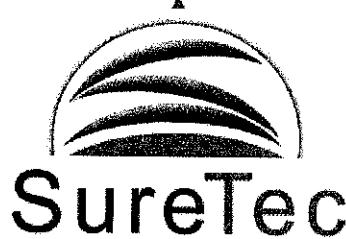
Suitable bid security in the amount of:

Thirteen Thousand Six hundred Fourteen Dollars and Ninety Five Cents

(\$ 13,614.95) Dollars and equal to five (5%) percent as called or in the advertisement for bids which accompanies this proposal. This sum is to be forfeited to the County of Jefferson if the party or parties making the proposal fail to enter into a contract with the approved securities within fifteen (15) days after the Notice of Award has been made. The undersigned has examined the Plans and Specifications for the work to be done and has satisfied himself as to the work to be done and the conditions under which it must be carried out.

The Contractor shall commence work within three (3) days after the date of a written Notice to Proceed from the County and shall fully complete all work under this proposal within the scheduled time established by the Contract Documents. This proposal shall be equally binding to all heirs, administrators, executors, successors, and assigns.

FIRM NAME	<u>Boyer Bldg & Desing, Inc</u>
BY	<u>S.M. Tufail</u>
TITLE	President
ATTEST	<u>Stephanie M. Tufail</u>
TITLE	Office Manager/Notary
ADDRESS	1701 Towne View Dr
TELEPHONE	DeSoto, MO 63020
	636-337-9119



BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we Boyer Building & Design, Inc. as principal, hereinafter called the "Principal," and **SURETEC INSURANCE COMPANY**, 1330 Post Oak Boulevard, Suite 1100, Houston, Tx 77056, as surety, hereinafter called the "Surety," are held and firmly bound unto County of Jefferson as obligee, hereinafter called the Obligee, in the sum of Five Percent (5 %) of the Amount Bid by Principal for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for Rebid County Jail Shower Renovations.

NOW, THEREFORE, if the contract be timely awarded to the Principal and the Principal shall within such time as specified in the bid, enter into a contract in writing or, in the event of the failure of the Principal to enter into such Contract, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, neither Principal nor Surety shall be bound hereunder unless Obligee prior to execution of the final contract shall furnish evidence of financing in a manner and form acceptable to Principal and Surety that financing has been firmly committed to cover the entire cost of the project.

SIGNED, sealed and dated this 6th day of December, 20 16.

Boyer Building & Design, Inc.
(Principal)

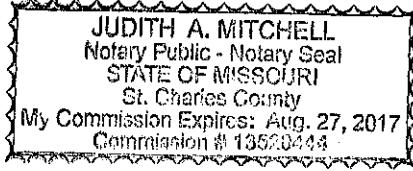
BY: Q/T
TITLE: President

SureTec Insurance Company

BY: Brandi Bullock
Brandi Bullock, Attorney-in-Fact

State of Missouri
County of Jefferson

On this 6th day of December, 2016, before me personally appeared
Brandi Bullock to me known to be an Attorney-in-Fact of
SureTec Insurance Company the corporation described in the
within instrument, and he acknowledged that he executed the within instrument as the act of the said
Company in accordance with authority duly conferred upon him by said Company.



Judith A. Mitchell
Notary Public

SureTec Insurance Company
LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Brandi Bullock, Don K. Ardolino, Kimberley A. Connell, Christopher J. O'Hagan

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Ten Million and 00/100 Dollars (\$10,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment shall continue in force until 5/18/2017 and is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of March, A.D. 2013.

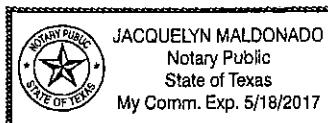


SURETEC INSURANCE COMPANY

By:

John Knox Jr., President

On this 21st day of March, A.D. 2013 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 6th day of December, 1891.

day of December, 2000
M. Brent Beatty
M. Brent Beatty, Assistant Secretary

**Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.**