

415 N. Broadway

Oklahoma City

Oklahoma 73102



V. 405.232.8787

www.tapokc.com

info@tapokc.com

PROJECT MANUAL

Date: October 9, 2025

Buck Thomas Park Restroom Facilities 1903 NW 12TH Street Moore, Oklahoma 73160.

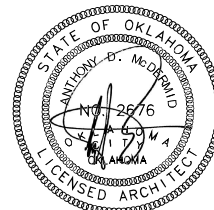
TAP PROJECT NO. 2221

CITY OF MOORE PROJECT NO. 2026-003

Anthony McDermid, AIA, RIBA
Principal-in-Charge

Clay Dobbins, AIA
Project Architect

Chris Teehee
Production Manager | Project Manager



10/09/2025

SET NO.

CONTRACT DOCUMENTS AND
TECHNICAL SPECIFICATIONS
FOR

**BUCK THOMAS PARK RESTROOM FACILITIES
PROJECT No. 2026-003**

CITY OF MOORE

CLEVELAND COUNTY, OKLAHOMA

SET NO.:

DATE: October 20, 2025

PREPARED BY:

City of Moore

City Manager's Office

CONTRACT DOCUMENTS
AND
TECHNICAL SPECIFICATIONS
FOR
BUCK THOMAS PARK RESTROOM FACILITIES
PROJECT No. 2026-003
for
CITY OF MOORE
CLEVELAND COUNTY, OKLAHOMA

Prepared by:

TAP
ARCHITECTURE
415N. BROADWAY
AVE.
OKLAHOMA CITY,
OK 73102

Approved: October 20, 2025

Mark Hamm, Mayor

Brooks Mitchell, City Manager

Notice to Bidders

Public Construction Contract

Date of Notice:
October 27, 2025

Date Documents Available:
October 27, 2025

SUBMISSION LOCATION & TIME: BY 1:30 P.M. November 24, 2025

Purchasing Agent Office 301 N. Broadway Moore, OK 73160-5130 Phone: 405.793.5000

Bid Opening: Date: November 24, 2025 Time: 2:00 p.m.

Location: 301 N. Broadway, Moore OK Council Chambers, City Hall

Project Title: BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

Bid Instructions: Bids timely filed with the City Clerk shall be publicly opened and read aloud at the time and location specified as bids above. Bids received more than ninety six (96) hours, excluding Saturdays, Sundays and holidays, before the time set for opening of bids, as well received after the time set for opening of bids, will not be considered and will be returned unopened. Within sixty (60) days from the bid opening date, the successful bidder shall execute a written contract embodying all provisions of the bidding documents.

For Technical Information, contact: Greg Deaver, with the City of Moore
Phone Number: 405.793.5000

A Current Bid Holders List can be obtained by logging onto www.cityof.Moore.ok.us, City Clerk, Bid Items,

Description of Work: Provide construction for two new restroom buildings for Buck Thomas Park.

Estimated Cost Range of Project:

From:

To:

Time for Project Completion:

Calendar Days

***Wage Rates:**

NO

Plans, Specs & Bidding Document Available at: TAP Architecture
415 N. Broadway Ave
Oklahoma City, OK 73102

7:30 a.m. to 5:30 p.m. Monday through Thursday Phone: 405.232.8787

8:00 a.m. to 12:00 p.m. Friday

Deposit for Plans & Specs:

\$25.00

Digital Free

Prebid Conference

Location: 301 N. Broadway
Moore, OK
(City Council Chambers (Room))

Time: 10:00 a.m.
Date: November 18, 2025

Attendance Mandatory?
YES
FOR GENERAL CONTRACTOR

Bid Bond: A cashier's check, a certified check, or a surety bond in the amount of five percent (5%) of the bid shall accompany the sealed proposal of each bidder. Deposits will be returned to the unsuccessful bidders. Deposits will be returned to successful bidder upon execution of contract documents.

*Bids shall also be made in accordance with the prevailing hourly rate of wages for this locality and project as determined by the Commission of Labor and filed with the Secretary of State in accordance with the provisions of 40 O.S. 1971, 197.1-17, which prevailing hourly rate of wages is made a part of this notice by reference as though fully set forth herein.

THE CITY COUNCIL OF THE CITY OF MOORE RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS.
CITY OF MOORE, OKLAHOMA By: Vanessa Kemp, City Clerk

CONTRACT DOCUMENTS AND
TECHNICAL SPECIFICATIONS
FOR CONSTRUCTION OF

BUCK THOMAS PARK RESTROOM FACILITIES,
PROJECT No. 2026-003

CITY OF MOORE
CLEVELAND COUNTY, OKLAHOMA

CONTENTS

I.	Contract Documents	Page
	A. Table of Contents	4
	B. Solicitation for Bids	5
	C. Information for Bidders	7
	D. Bidding Documents:	
	1. Contractor's Checklist of Required Items	14
	2. Bid Proposal	15
	3. Bid Schedule	16
	4. Anti-collusion Affidavit	18
	5. Business Relationships Affidavit	20
	6. Experience & Capability Questionnaire	21
	E. Contract	24
	F. Performance Bond	29
	G. Statutory Bond	31
	H. Maintenance Bond	33
	I. General Conditions Contents	35
	J. General Conditions	37
	K. Forms:	
	1. Work Order	67
	2. Affidavit for Payment	68
	3. Payment Certificate	69
	4. Contractor's Release to the City	70
	5. Waiver and Release of Lien	71
II.	Technical Specifications	72
III.	Plans	Refer Construction Documents

SOLICITATION FOR BIDS

NOTICE is hereby given that the CITY OF MOORE, OKLAHOMA, will receive sealed bids at the Office of the Purchasing Agent, City Hall, 301 N. Broadway, Moore, Oklahoma, 73160-5130, until 1:30 o'clock P.M., Local Time, on the 24 day of November 2025, for the construction of

BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

1. Bid Requirements.

- a. Bids shall be made in accordance and fully comply with

Solicitation for Bids
Requirements for Bidders
Bidder's Proposal
Plans and Specifications
Contractors Qualifications

and other bidding documents on file and available for examination at the Office of the City Clerk in City Hall. These documents are made a part of this notice as though fully set forth herein.

- b. Bids may require compliance with the prevailing hourly rate of wages for this locality and project as determined by the Commission of Labor and filed with the Secretary of State, a copy of which is on file with the City Clerk, in accordance with the provisions of 40 Oklahoma Statute 1991, 196.1-196.14, which prevailing hourly rate of wages is made a part of this solicitation by reference as though fully set forth herein.
- c. A cashier's check, a certified check, or a surety bond in the amount of five percent (5%) of the bid shall accompany the sealed proposal of each bidder. Such deposits will be returned to the unsuccessful bidders.

2. Filing of Bids.

- a. Bids received more than ninety-six (96) hours before the time set for opening of bids, (excluding Saturdays, Sundays, and holidays), and bids received after the time set for opening of bids will not be considered and will be returned unopened.
- b. Bids timely filed with the City Clerk shall be publicly opened and read aloud in the Council Chambers at City Hall immediately after the closing time above stated. No bidder may withdraw a bid within sixty (60) days after the actual date of the opening

thereof. Within sixty (60) days from the bid date, the owner may award a contract to the successful bidder or reject any or all bids for the project.

3. Obtaining Documents.

Complete sets of the Plans, Specifications and all other bidding documents may be obtained from TAP Architecture, 415 N Broadway Avenue, Oklahoma City, Oklahoma 73102 (phone 405.232.8787) upon remittance of a **\$25.00 per physical set and non-refundable.**

4. A **MANDATORY PRE-Bid Conference** will be held at **301 N. Broadway**, Moore, Oklahoma, at **10:00 a.m.**, Local Time, on **November 18, 2025**. City Council Chambers.

5. The City Council of the City of Moore reserves the right to reject any or all bids.

For the CITY OF MOORE, OKLAHOMA

INFORMATION FOR BIDDERS

1. Receipt and Opening of Bids

The City of Moore (herein called the "Owner") invites bids on the forms attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Office of the Purchasing Agent until 1:30 o'clock, P.M., Local Time on **November 24, 2025**, and then at 2:00 P.M. will be publicly opened and read aloud at the Council Chambers, New City Hall, at 301 N. Broadway, Moore, Oklahoma. The envelopes containing the bids must be sealed, addressed to the Purchasing Agent, 301 N. Broadway, Moore, Oklahoma, 73160-5130, and designated as bid for the

BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within sixty (60) days after the actual date of the opening thereof.

2. Preparation of Bid

Each bid must be submitted on the prescribed forms. All blanks and spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing certifications must be fully completed and executed when submitted.

Bids and affidavits must be filed in sealed envelopes within the time limit for receiving proposals, as stated in the SOLICITATION FOR BIDS. Bid envelopes shall legibly bear the word "PROPOSAL" with the name of the Project. If forwarded by mail, the sealed envelope containing the bid **must** be enclosed in another envelope addressed as specified in the bid form. The original copy shall be filed with the CITY OF MOORE in the CITY CLERK's office in the MOORE CITY HALL. All blank spaces in the proposal forms shall be correctly filled-in and the bidder shall state the prices, typewritten or written in ink, both in words and numerals, for which he proposes to do the work contemplated or furnish the materials required. All prices shall be distinctly legible.

3. Method of Bidding

The Owner invites the following bid(s): **UNIT PRICE**

4. Bid Surety

Each bid must be accompanied by certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent (5%) of the bid. Such cash, checks, or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or, if no award has been made within 60 days after the opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

Proposals will not be considered unless the original filed with the City is accompanied by the described Bid Surety made payable to the City of Moore. The proposal guaranty is required as evidence of good faith and as a guarantee that, if awarded the contract, the bidder will execute the contract and furnish the required bonds.

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

5. Qualification/Disqualification of Bidders

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out contract requirements and complete the work contemplated therein. Conditional bids will not be accepted.

Bidders will be disqualified and their proposals not considered for any of the following specific reasons (These reasons are not all inclusive):

- a. Where more than one proposal for an individual firm, partnership, or corporation is filed under the same or different names; and where such proposals are not identical in every respect
- b. Reason for believing that collusion exists among the bidders
- c. Reasonable grounds for believing that the bidder holds interest in more than one proposal for the work contemplated or materials to be furnished
- d. Incomplete work that, in the judgment of the City, will hinder or prevent the prompt commencement or completion of this project

6. Power of Attorney

Attorneys-in-fact who sign bid bonds or contract bonds must submit with each bond a certified and effectively dated copy of their power of attorney.

If the proposal is submitted by an individual, his name must be signed by him or his duly authorized agent and his post office address given. If the proposal is submitted by a firm or partnership, the name and post office address of each member of the firm must be given with the proposal signed by a duly authorized member of the firm or partnership. If the proposal is made by a company or corporation, the state in which the company or corporation is chartered and business address must be given; and the proposal must be signed by a duly authorized official or agent.

7. Time of Completion and Liquidated Damages

The Contractor hereby agrees to commence work under the Contract on a date specified in a written "Notice to Proceed" of the Owner, and to fully complete the project within **120 consecutive calendar days**. The Contractor further agrees to pay as liquidated damages, the sum of **Eight Hundred Dollars and 00/100 (\$800.00) for each consecutive calendar day** thereafter as provided in the Contract and General Conditions.

8. Rejection of Proposals

The City reserves the right to reject any or all proposals submitted, all of which are subject to this reservation. Proposals shall be rejected for any of the following specified reasons (These reasons are not all inclusive):

- a. Proposals received after the time limit stated in the solicitation
- b. Proposal prices obviously unbalanced
- c. Proposals that are incomplete insofar as the Non-Collusion Affidavit, required signatures, or containing any irregularities of substance

9. Notice of Award

The Owner will make every reasonable attempt to award the contract within ten (10) days of the bid opening date, but reserves the right to examine all the bids in their entirety and to take whatever time may be required, in the best interest of the Owner, to accomplish a complete and fair bid analysis.

10. Method of Award - Lowest Responsible Bidder

Award of contract will be made by the City Council, upon recommendation of the City Manager, to the lowest responsible bidder submitting a responsive bid and meeting the requirements of the City. The Owner may reject all bids or may award the contract with any selected alternatives based upon available funding.

11. Cancellation of Award

The City reserves the right to cancel the award of any contract at any time before the execution of said contract without liability against the City.

12. Obligation of Bidder

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall not relieve any bidder from any obligation in respect of his bid.

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of the contract. Insofar as possible, the contractor must employ methods or means that will not cause any interruption of or interference with the work of any other contractor.

All bidders, by submittal of a proposal, represent that they have examined the site prior to submittal and are fully informed regarding facilities and conditions affecting work, costs, risks, and obligations to be met, regardless of any omissions of the specifications.

Any neglect or failure on the part of the bidder to obtain reliable information regarding the conditions to be encountered shall not relieve the successful bidder from any risks or liabilities or from the responsibility for the completion and acceptance of the project.

13. MANDATORY Pre-Bid Conference

A Mandatory Pre-Bid Conference will be held at **301 N. Broadway**, Moore, OK, at **10:00 a.m.** on **November 18, 2025**. **City Council Chambers.**

14. Addenda and Interpretations

No interpretation of the means of the plans, specifications, or other pre-bid documents will be made to any bidder orally.

Each written request for such interpretation should be addressed to TAP Project Manager, 415 Broadway, Oklahoma City, Oklahoma, 73102. To be given consideration, each such request must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications. Failure of any bidder to receive any such addendum or

interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so listed shall become part of the contract documents.

15. Security for Faithful Performance

The Contractor shall deliver the executed contract and all required surety bonds within ten (10) days upon receipt of the contract from the Owner. With the execution and delivery of the Contract, the Contractor shall furnish and file with the City in the amounts herein required, the surety bonds listed below. The surety on such bonds shall be a duly authorized surety company satisfactory to the Owner.

- a. A good and sufficient Performance Bond in an amount equal to one hundred percent (100%) of the approximate total amount of the Contract, guaranteeing the full and faithful execution of the work and performance of the Contract and for the protection of the City and all property owners interested against any improper execution of the work or the use of inferior materials.
- b. A good and sufficient Statutory Bond in an amount equal to one hundred percent (100%) of the approximate total amount of the Contract, guaranteeing payment for all labor, materials, and equipment used in the construction of the project.
- c. A good and sufficient Maintenance Bond in an amount equal to one hundred percent (100%) of the total amount of the Contract, guaranteeing the maintenance in good condition of such project for a period of two (2) years from and after the time of its completion and acceptance by the City.

No surety will be accepted who is in default or delinquent on any bond or who holds interest in any litigation against the City. All bonds shall be made on forms furnished by the City and shall be executed by surety companies licensed to do business in the State of Oklahoma and shall conform to the requirements as set forth herein. Each Bond shall be executed by the Contractor and the Surety.

Should any surety on the Contract be determined unsatisfactory at any time by the City, notice will be given to the Contractor to that effect; and the Contractor shall forthwith substitute a new Surety or Sureties satisfactory to the City. No payment will be made under the Contract until the new Surety or Sureties, as required, have qualified and have been accepted by the City. The Contract shall not be operative, nor shall any payments be due until approval of the bonds has been made by the City.

16. Laws and Regulations

The bidder's attention is directed to the fact that all applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construc-

tion of the project shall apply to the contract throughout and they will be deemed to be included in the contract the same as though herein written out in full.

17. Sales Tax Exemption

Pursuant to Oklahoma Statutes, Title 68, 1356(10), Contractors and Subcontractors shall be exempted from the tax levied on the sale of tangible personal property or services necessary for the completion of this construction contract. Any Contractor or Subcontractor making purchases for this contract on behalf of the City of Moore shall certify, in writing, on the copy of the invoice or sales ticket to be retained by the vendor, that the purchases are made for and on behalf of the City of Moore.

Contractors and Subcontractors shall request a written Sales Tax Exemption by contacting the Purchasing Agent, City of Moore, 301 N. Broadway, Moore, Oklahoma, 73160-5130, Ph. 405.793.5022, who will issue such exemption on an individual project basis. It shall be the Contractor's and Subcontractor's responsibility to secure the Sales Tax Exemption and failure to do so will not lessen their liability for payment of the sales tax.

Two Tax Commission interpretations of the Oklahoma statutes Title 68, 1356(10) are listed below to avoid contention among the City of Moore, its contractors, and the Tax Commission:

"Exemptions apply to materials permanently incorporated into the project, but not to concrete forms nor to other tools."

"The same reasoning precludes exceptions being applied to rental items."

The Contractor shall certify that purchases are made for or are on behalf of the City of Moore. Persons who make wrongful or erroneous certification(s) shall be guilty of a misdemeanor and shall be punished as provided in the statutes.

18. Safety Standards and Accident Prevention

With respect to all work performed under this contract, the Contractor shall:

- a. Comply with the safety standard provisions of applicable laws, building and construction codes, and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations.
- b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
- c. Maintain as required by OSHA standards, all required articles necessary for giving first aid to the injured.

19. Access to Site

Access to the site is illustrated on the location map. It shall be the Contractor's responsibility to determine restrictions, if any, as to loads, bridge and road clearances, channel depths, and private property limitations that may influence access to the site.

20. Notice of Special Conditions

Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

- a. Time for Completion and Liquidated Damages
- b. Wage rates and Insurance Requirements
- c. Inspection and Testing of Materials
- d. Stated allowances

21. Payments to Contractor

The Owner will make progress payments to the Contractor no more than once per month upon request of the Contractor. Pay requests take approximately 3-4 weeks to process.

Such payment will be made on the basis of an agreed estimate of work performed since the previous pay request, provided that the Contractor and the City Manager shall have previously come to an agreement as to the amount of the request prior to submission.

The City shall retain 5% of the amount of each estimate until the project is complete.

CONTRACTOR'S CHECKLIST OF REQUIRED ITEMS

Completed*

- | | | |
|----|---|-------|
| 1. | Bid Proposal | _____ |
| 2. | Bid Bond | _____ |
| 3. | Anti-Collusion Affidavit | _____ |
| 4. | Business Relationships Affidavit | _____ |
| 5. | Experience and Capability Questionnaire | _____ |

*Check when filled out, signed, and included with submission of bid packet.

BID PROPOSAL

Date: _____

The Honorable Mayor and City Council
City of Moore
301 N. Broadway
Moore, Oklahoma 73160-5130

RE: Proposal of _____ (hereinafter called "Bidder") a corporation/partnership/individual (strike out inapplicable term) organized and existing under the laws of the State of _____.

Gentlemen:

The Bidder, in compliance with your invitation for bids for the construction of

BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

having examined the Plans and Specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding construction of the proposed project (including availability of material and labor), hereby proposes to furnish all labor, materials, and supplies to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Proposal will be made a part.

Bidder hereby agrees to commence work under this contract on a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within ____ (Bidder to fill in days) **consecutive calendar days** thereafter as stipulated in the Specifications. Bidder further agrees to pay as liquidated damages the sum of **EIGHT HUNDRED and 00/100 Dollars (\$800.00) for each consecutive calendar day** thereafter that the Contract is not completed as provided in the General Conditions.

Bidder acknowledges receipt of the following Addenda:

Bidder agrees to perform all of the construction work described in the Specifications and shown on the Drawings for the following **UNIT PRICES**:

BID SCHEDULE
BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

Div #	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
Div. 01	1.00	LS	GENERAL CONDITIONS	\$	\$
Unit Price In Words			Dollars		
Div. 02	1.00	LS	DEMOLITION	\$	\$
Unit Price In Words			Dollars		
Div. 03	1.00	LS	CAST-IN-PLACE CONCRETE	\$	\$
Unit Price In Words			Dollars		
Div. 04	1.00	LS	MASONRY	\$	\$
Unit Price In Words			Dollars		
Div. 05	1.00	LS	METALS	\$	\$
Unit Price In Words			Dollars		
Div. 06	1.00	LS	WOOD, PLASTICS, & COMP. (Rough Carpentry / Wood Truss)	\$	\$
Unit Price In Words			Dollars		
Div. 07	1.00	LS	THERMAL & MOISTURE PROTECTION	\$	\$
Unit Price In Words			Dollars		
Div. 08	5.00	EA.	OPENINGS	\$	\$
Unit Price In Words			Dollars		
Div. 09	1.00	LS	FINISHES	\$	\$
Unit Price In Words			Dollars		
Div. 10	1.00	LS	SPECIALTIES	\$	\$
Unit Price In Words			Dollars		
Div. 22	1.00	LS	PLUMBING	\$	\$
Unit Price In Words			Dollars		
Div. 23	1.00	LS	HEATING, VENTILATING, AND AIR-CONDITIONING	\$	\$
Unit Price In Words			Dollars		

Div. 26	1.00	LS	ELECTRICAL	\$	\$
Unit Price In Words			Dollars		
Div. 31	1.00	LS	EARTHWORK	\$	\$
Unit Price In Words			Dollars		
	1.00	LS	BONDING, INSURANCE, GC OVERHEAD & PROFIT	\$	\$
Unit Price In Words			Dollars		
TOTAL AMOUNT BID					\$
Total Amount Bid In Words			Dollars		

Amounts are to be shown in both words and figures. In case of any discrepancy, the amount shown in words will govern.

The above unit prices shall include all costs for labor, materials, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of acceptance of this bid, Bidder will execute the formal Contract attached within ten (10) days and deliver all bonds as required by the General Conditions. The bid security attached in the sum of _____ DOLLARS (\$ _____) is to become the property of the Owner in the event the Contract and Bonds are not executed within the time set forth above, as liquidated damages for the delay and additional expense to the Owner caused thereby.

RESPECTFULLY SUBMITTED,

By: _____

Title: _____

Address: _____

(AFFIX SEAL-if bid is by a corporation)

ANTICOLLUSION AFFIDAVIT

The following affidavit is submitted by Bidder as a part of this bid and proposal:

**STATE OF OKLAHOMA }
CLEVELAND COUNTY }**

The undersigned deponent, of lawful age, being duly sworn, upon his oath, deposes and says that:

- he has lawful authority to execute the within and foregoing proposal;
- he has executed the same by subscribing his name hereto under oath for and on behalf of said bidder;
- bidder has not, directly or indirectly, entered into an agreement; expressed or implied, with any bidder(s) having as its object controlling of the price or amount of such bid(s), the limiting of the bids or the bidders, the parceling or farming out to any bidder(s) or other persons of any part of the contract or any part of the subject matter of the bid(s) or of the profits thereof; and
- he has not and will not divulge the sealed bid to any person whomsoever, except those having a partnership or other financial interest with him in said bid(s) until after the said sealed bid(s) are opened.

Deponent further states that:

- the bidder has not been a party to any collusion among bidders or prospective bidders in any restraint of freedom of competition by agreement to bid at a fixed price, or to refrain from bidding;
- the bidder has not been a party to any collusion with any City official or employee as to quantity, quality, or price in the prospective contract, or any other terms of said prospective contract;
- the bidder has not been in any discussions between bidders and any City official concerning exchange of money or other thing of value for special consideration in the letting of a contract;
- the bidder has not paid, given, or donated or agreed to pay, give, or donate to any officer or employee of the CITY OF MOORE any money or other thing of value, either directly or indirectly, in the procuring of the award of contract pursuant to this bid.

SIGNED: _____
(Name of Bidder)

BY: _____

Title: _____

Subscribed and sworn to before me this ____ day of _____, 2025.

Notary Public

My Commission Expires: _____

BUSINESS RELATIONSHIPS AFFIDAVIT

STATE OF OKLAHOMA }

CLEVELAND COUNTY }

_____, of lawful age, being first duly sworn, on oath says that he is the agent authorized by the bidder to submit the attached bid. Affidavit further states that the nature of any partnership, joint venture, or other business relationship presently in effect or which existed within one (1) year prior to the date of this statement with the architect, engineer, or other party to the project is as follows:

Affiant further states that any such business relationship presently in effect or which existed within one (1) year prior to the date of this statement between any officer or director of the bidding company and any officer or director of the architectural or engineering firm or other party to the project is as follows:

Affiant further states that the names of all persons having any such business relationships and the positions they hold with their respective companies or firms are as follows:

(If none of the business relationships hereinabove mentioned exist, affiant should so state.)

Signed: _____

By: _____

Title: _____

Subscribed and sworn to before me this ____ day of _____, 2025.

Notary Public

My Commission Expires:

EXPERIENCE AND CAPABILITY QUESTIONNAIRE

_____, 2025

The Honorable Mayor and City Council
City of Moore
301 N. Broadway Street
Moore, Oklahoma 73160-5130

Gentlemen:

Re: **BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003**

The following information is submitted in answer to the questions listed below:

1. How many years experience as a general contractor have you had in construction similar to the project upon which the attached proposal is submitted?

2. If you have constructed similar projects, list at least three contracts, giving name and location of each project, amount and date of contract, and the owner or agency for whom the work was performed (list only prime contracts).

3. What is the largest project you have ever undertaken as the Prime Contractor? Give location, amount, and date of contract, type of construction, etc.

4. Have you ever failed to complete a contract or been involved in litigation regarding the acceptance of final settlement for work performed? _____. If the answer is "Yes", explain fully.

5. If you are the successful bidder on this project, do you propose to sublet or assign the project or any part thereof to some other contractor?

6. Is your organization an established business, with construction equipment and personnel ready to start work on this project if you are the successful bidder?

7. List all the projects that you have under contract this date, upon which final acceptance has not been made, giving the following information:

CONTRACT NO. 1

Name of Project _____

Owner _____ Location _____

Amount of Contract _____ Date of Contract _____

Time Allowed for Construction _____

Percent of Time Elapsed _____

Percent of Work Actually Accomplished _____

Has there been any litigation? _____

If answer to above question is "Yes", explain fully:

CONTRACT NO. 2

Name of Project _____

Owner _____ Location _____

Amount of Contract _____ Date of Contract _____

Time Allowed for Construction _____

Percent of Time Elapsed _____

Percent of Work Actually Accomplished _____

Has there been any litigation? _____

If answer to above question is "Yes", explain fully:

CONTRACT NO. 3

Name of Project _____

Owner _____ Location _____

Amount of Contract _____ Date of Contract _____

Time Allowed for Construction _____

Percent of Time Elapsed _____

Percent of Work Actually Accomplished _____

Has there been any litigation? _____

If answer to above question is "Yes", explain fully:

CONTRACT NO. 4

Name of Project _____

Owner _____ Location _____
 Amount of Contract _____ Date of Contract _____
 Time Allowed for Construction _____
 Percent of Time Elapsed _____
 Percent of Work Actually Accomplished _____
 Has there been any litigation? _____
 If answer to above question is "Yes", explain fully:

(Attach additional sheets if required)

8. We submit the following list of major construction equipment now owned by us and available for the work that may be awarded, which is in operating condition and good state of repair.

<u>No.</u>	<u>Item</u>	<u>Type</u>	<u>Size or Capacity</u>	<u>Present Value</u>
------------	-------------	-------------	-------------------------	----------------------

--	--	--	--	--

Firm Name

Agent Signature

Title

STATE OF OKLAHOMA }
COUNTY OF CLEVELAND }

_____, of legal age, being first duly sworn, upon his oath deposes and says that he executed the above questionnaire on behalf of the Bidder therein named; and that he had lawful authority to do so, and that the information contained therein is true and correct to the best of his knowledge and belief; that he has truthfully answered the questions set forth, and that he has not knowing withheld any information which might affect his status as bidder.

Subscribed and sworn to before me this _____ day of _____, 2025.

Notary Public

My Commission Expires: _____

CONTRACT

THIS CONTRACT made and entered into this ___ day of _____, 2025, by and between CITY OF MOORE, Oklahoma, a Municipal Corporation, acting by and through the Mayor and City Council, party of the first part, hereinafter referred to as "CITY", and _____, party of the second part, hereinafter referred to as "CONTRACTOR".

WITNESSETH:

WHEREAS, the CITY has caused to be prepared in accordance with law, certain Contract Documents and Technical Specifications (including Plans) for the work hereinafter described, and has caused a Solicitation for Bids to be given and advertised as required by law, and has received sealed proposals for the furnishing of all labor and materials for

BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

and

WHEREAS, the Contractor in response to said Solicitation for Bids submitted to the CITY in the manner and at the time specified a sealed proposal in accordance with the terms and provisions of said Contract Documents and Technical Specifications, Plans and Addenda(s) associated with this project; and

WHEREAS, the CITY, in the manner provided by law, has publicly opened, examined, and canvassed all the proposals submitted and has determined and declared the abovenamed Contractor to be the best responsive bidder on the above described project; and

WHEREAS, the City, has duly awarded this Contract to said Contractor for the sum specified in the Contractor's proposal, to wit:

_____ Dollars (\$) _____). Said proposal of ___ ___ is incorporated by reference into this contract.

NOW, THEREFORE, for and in consideration of the mutual agreements and covenants herein contained, the parties to this Contract have agreed, and hereby agree, as follows:

1. The Contractor shall, in a good and first-class workmanlike manner, at his own cost and expense, furnish all labor and materials, tools, and equipment required to perform and complete said work in strict accordance with this Contract, the Contract Documents and Technical Specifications and all applicable Plans and Addenda, all of which are on file in the office of the City Manager, 301 N. Broadway, Moore, OK, 73160-5130, and hereby incorporated by reference and made a part of this Contract as if the same were each herein set out at length.
2. The CITY will make progress payments to the Contractor no more than once per month upon request of the Contractor.

Such payment will be made on the basis of an agreed estimate of work performed since the previous pay request, provided that the Contractor and the City Manager shall have previously come to an agreement as to the amount of the request prior to submission.

The City shall retain five percent (5%) of the amount of each estimate until the project is complete. This retainage shall not be released until final acceptance of project by the City Council.

Each monthly estimate for payment must contain or have attached an affidavit for payment, as set forth in the Contract Documents and Technical Specifications.

On completion of the work, but prior to the acceptance by the CITY, it shall be the duty of the City Manager, or his authorized designee, to determine that said work has been completed and fully performed in accordance with said Contract Documents and Technical Specifications and all applicable Plans and Addenda; and upon making such determination said official shall make his final certificate to the CITY.

The Contractor hereby agrees to commence work under this Contract on a date to be specified in a written "Work Order" of the CITY and to fully complete the project within **ONE HUNDRED AND FIFTY (150) consecutive calendar days**. The Contractor further agrees to pay as liquidated damages, the sum of **Eight Hundred Dollars and 00/100 (\$800.00) for each consecutive calendar day** thereafter as provided in Paragraph 18 of the General Conditions section of the Contract Documents and Technical Specifications.

The Contractor shall furnish proof that all claims and obligations incurred by him in connection with the performance of said work have been fully paid and settled; said information shall be in the form of an affidavit constituting the Contractor's Release to City as set forth in the Contract Documents and Technical Specifications; thereupon, the final estimate (including any retained amounts) will be approved and paid.

3. Discrimination. The Contractor agrees in connection with the performance of work under this contract as follows:
 - a. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, disability, age or ancestry. Such actions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff, termination, rates of pay or other forms of compensation, and selection for training, (including apprenticeship.) The Contractor agrees to include this non-discrimination clause in any subcontracts connected with the performance of this Contract.

- b. The Contractor and subcontractor shall agree to post in a conspicuous place available to employees and applicants for employment, notice to be provided by the City Clerk of the City of Moore setting forth provisions of this section.
 - c. In the event of the Contractor's non-compliance with the above non-discrimination clause, this Contract may be terminated by the CITY. The Contractor may also be declared by the CITY to be ineligible for future contracts with the CITY until satisfactory proof of intent to comply shall be made by the Contractor.
4. Use of Subcontractors. The Contractor shall actively solicit bids for the subcontracting of goods or services from qualified minority businesses. At the request of the CITY, the Contractor shall furnish evidence of compliance with this requirement of minority solicitation. The Contractor further agrees to consider the grant of subcontracts to minority bidders on the basis of substantially equal proposals in the light most favorable to said minority businesses.
 5. Entire Contract. This Contract and all the documents incorporated by reference contain the entire understanding and agreement of the parties upon the subject matter hereof. There is no agreement, oral or otherwise, which is not set forth in writing hereto or attached. This Contract includes the following items: this Contract, the Contract Documents and Technical Specifications, all applicable Plans and Addenda and the Contractor's Proposal.
 6. Modification and Termination. This Contract cannot be modified or terminated except in writing signed by both parties or as otherwise provided herein.
 7. Assignment. This Contract shall not be assigned without the written consent of the CITY.
 8. Bankruptcy. If the Contractor becomes bankrupt or insolvent, or if a petition in bankruptcy is filed against the Contractor, or if a receiver is appointed for the Contractor, the CITY shall have the right to terminate this Contract upon written notice to the Contractor without prejudice to any claim for damages or any other right of the CITY under this Contract to the time of such termination.
 9. Variables in Cost. The parties hereto assume and understand that the variables in Contractor's cost of performance may fluctuate; consequently, the parties hereto agree that any fluctuations in Contractor's costs will in no way alter the Contractor's obligations under this Contract nor excuse performance or delay on his part.
 10. Choice of Laws and Venue. This Contract shall be governed by the laws of the State of Oklahoma. Any lawsuit brought concerning this Contract shall be filed with the appropriate state court, Cleveland County, Oklahoma or with the United States District Court for Western District of Oklahoma, as applicable.

11. This Contract requires proper signature and acceptance by the Contractor and approval by the Moore City Council before it becomes effective.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed, in three (3) originals, the day and year first above written.

(FOR CORPORATIONS ONLY)

Name of Corporation

By _____

Title _____

ATTEST:

Title _____
(AFFIX SEAL)

(FOR PARTNERSHIPS AND PROPRIETORSHIPS)

Name of Partnership or Proprietorship

By _____

Title _____

**COUNTY OF CLEVELAND }
STATE OF OKLAHOMA }**

Before me the undersigned, a Notary Public in and for said state, on this ____ day of _____, 2025, personally appeared _____, a member of the partnership/proprietorship _____ to me known to be the identical person who executed the within and foregoing instrument on behalf of said partnership/proprietorship and acknowledged to me that _____ (he/she) executed the same as _____ (his/her) free and voluntary act and deed, and for the free and voluntary act and deed of said partnership/proprietorship, for the uses and purposes therein set forth.

Notary Public

My Commission Expires _____

CITY OF MOORE, OKLAHOMA
A Municipal Corporation

Mark Hamm, MAYOR

ATTEST:

Vanessa Kemp, CITY CLERK

APPROVED as to form and legality this _____ day of _____, 2025.

Randy Brink, CITY ATTORNEY

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that

_____ as Principal, and
(full name and address)

_____ as Surety, a
(full name and address)

corporation organized under the laws of the State of _____, and authorized to transact business in the State of Oklahoma, are hereby held and firmly bound unto the CITY OF MOORE, as OWNER, in the penal sum

of _____ DOLLARS (\$_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, trustees, successors, and assigns, firmly by these presents.

The condition of this obligation is such that WHEREAS, said Principal entered into a written contract with the CITY OF MOORE, OKLAHOMA, dated on the ____ day of _____, 2025, for

BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

all in compliance with the plans and specifications therefore, made a part of said Contract and on file in the Office of the City Clerk, City of Moore, City Hall, 212 SW 9th St, Moore, Oklahoma 73160-5130.

NOW, THEREFORE, if said Principal shall

- (1) in all particulars, well, truly and faithfully perform and abide by said Contract, each and every covenant, and part thereof and shall fulfill all obligations resting upon said Principal by the terms of said Contract and said specifications; and
- (2) if said Principal shall promptly pay, or cause to be paid, all labor, materials and/or repairs and all bills for labor performed on said work, whether by subcontract or otherwise.

then this obligation shall be null and void. **Otherwise** said obligation shall be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode or procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligation of this bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized to do so, the day and year above written.

Dated this ____ day of _____, 2025.

Principal:

Surety:

(Name of Contractor)

By: _____
(Name & Title)

By: _____
Attorney-in-Fact (Affix Seal)

(FOR CORPORATIONS ONLY)

ATTEST:

(Name & Title)

(Affix Seal)

(FOR PARTNERSHIPS AND PROPRIETORSHIPS)

Notarized on this ____ day of _____, 2025

Notary: _____ My commission expires:

STATUTORY BOND

KNOW ALL MEN BY THESE PRESENTS that

_____ as Principal, and
(full name and address)

_____ as Surety, a
(full name and address)

corporation organized under the laws of the State of _____, and authorized to transact business in the State of Oklahoma, are hereby held and firmly bound unto the CITY OF MOORE, as OWNER, in the penal sum of

_____ DOLLARS (\$_____) in lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves and each of us, our heirs, executors, administrators, trustees, successors, and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that WHEREAS, said Principal entered into a written Contract with the CITY OF MOORE, OKLAHOMA, dated on the ____ day of _____, 2025, for

BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

all in compliance with the plans and specifications therefore, made a part of said Contract and on file in the Office of the City Clerk, City Hall, 301 N. Broadway, Moore, Oklahoma 73160-5130.

NOW, THEREFORE, if said Principal shall fail or neglect to pay all indebtedness incurred by said Principal or subcontractors of said Principal who perform work in the performance of such contract, for labor and materials and repairs to and parts for equipment used and consumed in the performance of said Contract within thirty (30) days after the same becomes due and payable, the person, firm, or corporation entitled thereto may sue and recover on this bond, the amount so due and unpaid. It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of this bond.

IN WITNESS WHEREOF, said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the year and day first above written.

Dated this _____ day of _____, 2025.

Principal:

Surety:

(Name of Contractor)

By: _____
(Name & Title)

By: _____
Attorney-in-Fact (Affix Seal)

(FOR CORPORATIONS ONLY)

ATTEST:

(Name & Title)

(Affix Seal)

(FOR PARTNERSHIPS AND PROPRIETORSHIPS)

Notarized on this _____ day of _____, 2025

Notary: _____ My commission expires: _____

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS that

_____ as Principal, and
(full name and address)

_____ as Surety, a
(full name and address)

corporation organized under the laws of the State of _____, and authorized to transact business in the State of Oklahoma, are hereby held and firmly bound unto the CITY OF MOORE, as OWNER, in the penal sum of

_____ DOLLARS (\$_____) in lawful money of the United States of America, said sum being equal to One Hundred Percent (100%) of the Contract price, for two (2) years after completion and acceptance of the project, payment of which, well and truly to be made, we bind ourselves and each of us, our heirs, executors, administrators, trustees, successors, and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that WHEREAS, said Principal entered into a written contract with the CITY OF MOORE, OKLAHOMA, dated on the _____ day of _____, 2025, for

BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

all in compliance with the plans and specifications therefore, made a part of this contract and file in the Office of the City Clerk of the City of Moore, City Hall, 301 N. Broadway, Moore, Oklahoma, 73160-5130.

NOW, THEREFORE, if said Principal shall pay or cause to be paid to the CITY OF MOORE, OKLAHOMA all damage, loss and expense which may result by reason of defective materials and/or workmanship in connection with said work for a period of TWO (2) years, from and after acceptance of said project by the CITY OF MOORE and if Principal shall pay or cause to be paid all labor and materials, including the prime contractor and all subcontractors; and if Principal shall save and hold the CITY OF MOORE harmless from any failure whatsoever of said Principal, then this obligation shall be null and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of the bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the surety

has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized to do so, the day and year first above written.

Dated this _____ day of _____, 2025.

Principal:

Surety:

(Name of Contractor)

By: _____
(Name & Title)

By: _____
Attorney-in-Fact (Affix Seal)

(FOR CORPORATIONS ONLY)

ATTEST:

(Name & Title) (Affix Seal)

(FOR PARTNERSHIPS AND PROPRIETORSHIPS)

Notarized on this _____ day of _____, 2025

Notary: _____ My commission expires: _____

General Conditions Contents

1. Contract and Contract Documents
2. Definitions
3. Additional Instructions and Detail Drawings
4. Shop or Setting Drawings
5. Materials, Services, and Facilities
6. Contractor's Title to Materials
7. Inspection and Testing of Materials
8. "Or Equal" Clause
9. Patents
10. Surveys, Permits, and Regulations
11. Contractor's Obligations
12. Weather Conditions
13. Protection of Work and Property- (Emergency)
14. Inspection
15. Reports, Records and Data
16. Superintendence by Contractor
17. Extras
18. Time for Completion and Liquidated Damages
19. Correction of Work
20. Subsurface Conditions Found Different
21. Claims for Extra Cost
22. Changes in Work
23. Right of Owner to Terminate Contract
24. Construction Schedule and Periodic Estimates
25. Payments to Contractor
26. Acceptance of Final Payment Constitutes Release
27. Payments by Contractor
28. Insurance
29. Contract Security
30. Additional or Substitute Bond
31. Assignments
32. Mutual Responsibility of Contractors
33. Separate Contracts
34. Subcontracting
35. Engineer's Authority
36. Use of Premises and Removal of Debris
37. Quantities of Estimate
38. Lands and Rights-of-Way
39. General Guaranty
40. Conflicts, Measurements and Discrepancies
41. Notice and Service Thereof
42. Provisions Required by Law Deemed Inserted
43. Protection of Lives and Health
44. Subcontracts

45. Equal Employment Opportunity
46. Prohibited Interests
47. Use and Occupancy Prior to Acceptance by Owner
48. Photographs of Project
49. Suspension of Work
50. Labor Provisions
51. Sales Tax Exemption
52. Special Equal Opportunity Provisions
53. Certification of Compliance Air and Water Acts
54. Employment of Handicap Persons
55. Employment of Females
56. Employment of Veterans

CITY OF MOORE
GENERAL CONDITIONS

1. Contract and Contract Documents

The Plans, Specifications, and Addenda shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

2. Definitions

The following terms as used in this contract are respectively defined as follows:

- a. "Contractor": A person, firm or corporation with whom the contract is made by the Owner.
- b. "Subcontractor": A person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreements with, the Contractor.
- c. "Work on (at) the project": Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor or any Subcontractor.
- d. "Engineer": The term engineer shall apply to the City Manager or his duly designated representative, to include consultants hired by the Owner to provide advice, assistance or direction concerning the contract.
- e. "Owner": The term Owner shall apply to the City of Moore, A Municipal Corporation, also referred to as the "CITY."

3. Additional Instructions and Detail Drawings

The Contractor will be furnished additional instructions and detailed drawings as necessary to carry out the work included in the contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions. The Contractor and the Engineer will prepare jointly: (a) a schedule, fixing the dates at which special detail drawings will be required; such drawings, if any, to be furnished by the Engineer in accordance with said scheduled; and (b) a schedule fixing the respective dates for

the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.

4. Shop or Setting Drawings

The Contractor shall submit promptly to the Engineer six copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Engineer and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Engineer with two corrected copies. If requested by the Engineer, the Contractor must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Engineer, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications, unless he notifies the Engineer in writing of any deviations at the time he furnishes such drawings.

5. Materials, Services, and Facilities

- a. It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time.
- b. Any work necessary to be performed after regular hours, on Sundays or Legal Holidays, shall be performed without additional expense to the Owner.

6. Contractor's Title to Materials

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract, or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

7. Inspection and Testing of Materials

- a. All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. The Owner will pay for all laboratory inspection service direct, and not as a part of the contract.

- b. Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

8. "Or Equal" Clause

Whenever a material, article, or piece of equipment is identified on the plans or in the specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, etc., it is intended merely to establish a standard. Any material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed is, in the opinion of the Engineer, of equal substance and function. The proposed substitution shall not be purchased or installed by the contractor without the Engineer's written approval.

9. Patents

- a. The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.
- b. License or Royalty Fees. License and/or royalty fees for the use of a process that is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized licensee, direct by the Owner and not by or through the Contractor.
- c. If the Contractor uses any design, device or materials covered by letters, patents or copyrights, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, that, without exception, the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his Sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

10. Surveys, Permits, and Regulations

- a. Unless otherwise expressly provided for in the Specifications, the Contractor shall be responsible for all surveying and construction staking for the project and the Owner

shall furnish to the Contractor all survey control points necessary as indicated in project drawings.

- b. The Contractor shall procure and pay all permits, licenses and approvals necessary for the execution of his contract.
- c. The Contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

11. Contractor's Obligations

- a. The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract any and all supplemental plans and drawings. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required.
- b. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Architect/Engineer and the Owner.

12. Weather Conditions

In the event of suspension of work, or during inclement weather, or whenever the Engineer shall direct, the Contractor will, and will cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors so to protect his work, such materials shall be removed and replaced at the expense of the Contractor.

13. Protection of Work and Property- (Emergency)

- a. The Contractor shall at all times safely guard the Owner's property from damage in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the contract or by the Owner, or his duly authorized representatives.
- b. In case of emergency which threatens loss or injury of property, and/or safety of life the Contractor will be allowed to act, without previous instructions from the Engineer, in a diligent manner. He shall notify the Engineer immediately thereafter.

Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Engineer for approval.

- c. Where the Contractor has not taken action but has notified the Engineer of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Engineer.
- d. The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 22 of the General Conditions.

14. Inspection

The authorized representatives and agents of the Owner shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.

15. Reports, Records, and Data

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this Contract.

16. Superintendence by Contractor

At the site of the work, the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.

17. Extras

Without invalidating the contract, the Owner may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly, and the consent of the Surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal; and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner and the price is stated in such order.

18. Time for Completion and Liquidated Damages

- a. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed".

- b. The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same; taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.
- c. If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor hereby agrees, as a part consideration for the awarding of this contract, to pay to the Owner the amount specified in the contract, **not as a penalty but as liquidated damages for such breach of contract** as hereinafter set forth, for each and every consecutive calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.
- d. The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain; and said amount is agreed to be the amount of the damages which the Owner would sustain and shall be retained from time to time by the Owner from current periodical estimates.
- e. It is agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever. Where, under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract.
- f. The Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner.
- g. The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to:
 - (1) To any preference, priority, or allocation order duly issued by the Owner;
 - (2) To unforeseeable cause beyond the control and without the fault or the negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather occurring prior to the original completion date. Except that in the case of severe weather the original completion date as set out in the contract shall be adjusted for severe weather occurring prior to the date originally specified in the contract as the date on which all work pursuant the

terms of the contract is to be completed. The revised date, adjusted as described, will be known as the adjusted completion date. There shall be no further adjustment or adjustments to the adjusted completion date, for any reason, once the adjusted completion date has been determined. All conditions of the contract must be satisfied by the Contractor on or before the original completion date or adjusted completion date, whichever is applicable. If all contract requirements have not been met by the original completion date or adjusted completion date, if applicable, liquidated damages, regardless of weather conditions, shall apply for all subsequent days until the actual completion of the contract terms by the contractor.

(3) To any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (1) and (2) of this article.

h. Provided, that the Contractor shall, within ten (10) days from the beginning of delay as set forth in (g) above, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner, in writing, of the causes of delay. The Owner shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

19. Correction of Work

All work, materials, (whether incorporated in the work or not), all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Engineer who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet his approval, they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, payment to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Engineer shall be equitable.

20. Subsurface Conditions Found Different

Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the Plans or indicated in the Specifications, he shall immediately give notice to the Engineer of such conditions before they are disturbed. The Engineer will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the Plans or indicated in the Specifications, he will at once make such changes in the Plans and/or Specifications as he may find necessary. Any increase or decrease of cost resulting from such changes shall be adjusted in the manner provided in Paragraph 22 of the General Conditions.

21. Claims for Extra Cost

No claim for extra costs or cost shall be allowed unless the same was done in pursuance of a written order of the Engineer approved by the Owner, as aforesaid, and the claim presented with the first estimate after the changed or extra work is done. When work is performed under the terms of subparagraph 22(b) of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.

22. Changes in Work

No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

- a. Unit bid prices previously approved.
- b. The actual cost of:
 - (1) Labor, including foreman,
 - (2) Materials entering permanently into the work,
 - (3) The ownership or rental cost of construction plant and equipment during the time of use on the extra work,
 - (4) Power and consumable supplies for the operation of power equipment,
 - (5) Insurance,
 - (6) Social Security and old age and unemployment contributions.

To the cost under b., there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) of the actual cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

23. Right of Owner to Terminate Contract

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract. Such notices shall contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor; and the Surety shall have the right to take over and perform the contract. If the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract at the expense of the Contractor. The Contractor and his Surety shall be liable to the Owner for any

excess cost occasioned the Owner thereby; and in such event, the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

24. Construction Schedule and Periodic Estimates

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner as estimated construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the Owner, (a) a detailed estimate giving a complete breakdown of the contract price, and (b) periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

25. Payments to Contractor

- a. At the request of the Contractor and no more than once per month, the Owner shall make a progress payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this contract. To ensure the proper performance of this contract, the City shall retain 5% of the amount of each estimate. On completion and acceptance of each separate building, public work, or other division of the contract, on which the price is stated separately in the contract, payment may be made in full, including retained percentages thereon, less authorized deductions.
- b. In preparing estimates, the material delivered on the site and preparatory work done may be taken into consideration.
- c. All material and work covered by partial payments made shall thereupon become the sole property of the Owner. This provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all the terms of the contract.
- d. The Owner reserves the right to withhold certain amounts and make application thereof. Specifically, the Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all

obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails to do so, then the Owner may, after having served written notice on the said Contractor, pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this contract. In no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

26. Acceptance of Final Payment Constitutes Release

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and other relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this contract or the Performance and Payment Bond.

27. Payments by Contractor

The Contractor shall pay,

- a. for all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered,
- b. for all materials, tools, and other expendable equipment to the extent of ninety percent (90%) of the cost thereof, not later than the 20th day of the calendar month following that in which said materials, tools, equipment are delivered at the site of the project, and the balance of the cost thereof, not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used, and
- c. to each of his subcontractors, not later than the 5th day following each payment to the Contractor the respective amounts allowed the Contractor on account of the work performed by his subcontractors to the extent of each subcontractor's interest therein.

28. Insurance

The Contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

- a. Worker's Compensation Insurance. The Contractor shall procure and shall maintain during the life of this contract Worker's Compensation Insurance as required by the State of Oklahoma for all of his employees to be engaged in work at the site of the project under this contract, and in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Worker's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this contract is not protected under the Worker's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.
- b. Contractor's General Liability and Property Damage Insurance and Vehicle Liability Insurance. The Contractor shall procure and shall maintain during the life of this contract, Contractor's General Liability Insurance, Contractor's Property Damage Insurance, and Vehicle Liability Insurance as follows:

Comprehensive General Liability and Bodily Injury:

Bodily Injury	<u>\$ 125,000.00</u> per person per occurrence
Property Damage	<u>\$ 100,000.00</u> each occurrence
Combined Single Limit	<u>\$1,000,000.00</u> per occurrence combined limit

Comprehensive Automobile:

Liability, Bodily Injury	<u>\$ 125,000.00</u> per person per occurrence
Property Damage	<u>\$ 100,000.00</u> each occurrence
Combined Limit	<u>\$1,000,000.00</u> per occurrence combined limit

- c. Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance. The Contractor shall either,
 - (1) require each of his subcontractors to procure, and to maintain during the life of his subcontract, Subcontractor's Public Liability Insurance of the type and in the amounts specified in subparagraph (b) hereof, or
 - (2) ensure the activities of his subcontractors in his own policy, specified in subparagraph (b) hereof.
- d. Scope of Insurance and Special Hazards. The insurance required under subparagraphs b. and c. hereof shall provide adequate protection for the Contractor and his subcontractors, respectively, against damage claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him, and also against any of the special hazards which may be encountered in the performance of this contract.

- e. Builder's Risk Insurance (Fire and Extended Coverage). Until the project is completed and accepted by the Owner, the Contractor (at the Owner's option) is required to maintain Builder's Risk Insurance (fire and extended coverage) on a one hundred percent (100%) completed value basis on the insurable portion of the project for the benefit of the Owner, the Contractor, and subcontractors as their interests may appear. This provision shall not release the Contractor from his obligation to complete, according to the plans and specifications, the project covered by the contract, and the Contractor and his Surety shall be obligated to full performance of the Contractor's undertaking.
- f. Proof of Carriage of Insurance. The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certification will not be canceled or materially altered, except after ten (10) days written notice has been received by the Owner."

29. Contract Security

The Contractor shall furnish a Performance Bond in an amount at least equal to one hundred percent (100%) of the contract price as security for the faithful performance of this contract and also a Statutory Bond in an amount not less than one hundred percent (100%) of the contract price or in a penal sum not less than that prescribed by State, territorial or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The Performance Bond and the Statutory Bond may be in one or in separate instruments in accordance with local law.

30. Additional or Substitute Bond

If at any time the Owner for justifiable cause shall become dissatisfied with any surety or sureties, then upon the Performance or Statutory Bonds, the Contractor shall within five (5) days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.

31. Assignments

The Contractor shall not assign the whole or any part of this contract or any moneys due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this contract.

32. Mutual Responsibility of Contractors

If, through acts of neglect on the part of the Contractor, any other contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration if such other Contractor or subcontractors will so settle. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

33. Separate Contract

The Contractor shall coordinate his operations with those of other contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractors, shall keep informed of the progress and the detail work of other Contractors and shall notify the Engineer immediately of lack of progress or defective workmanship on the part of other Contractors. Failure of a Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

34. Subcontracting

- a. The Contractor may utilize the services of specialty subcontractors on those parts of the work that, under normal contracting practices, is performed by specialty subcontractors.
- b. The Contractor shall not award any work to any subcontractor without prior written approval of the Owner. Approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.
- c. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions or persons directly employed by him.
- d. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provisions of the contract documents.

- e. Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

35. Engineer's Authority

- a. The Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such questions.
- b. The Engineer shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work that may arise between the Contractor under this contract and other contractors performing work for the Owner shall be adjusted and determined by the Engineer. Any work performed on areas which have been identified as obscure or in dispute but for which a determination has not been made by the Engineer, shall be at the sole risk of the Contractor.

36. Use of Premises and Removal of Debris

The Contractor expressly undertakes at his own expense:

- a. to take every precaution against injuries to persons or damage to property;
- b. to store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors;
- c. to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;
- d. to frequently clean up all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;
- e. before final payment to remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat orderly condition;

- f. to effect all cutting, fitting or patching of his work required to make the same to conform to the plans and specifications and, except with the consent of the Engineer, not to cut or otherwise alter the work of any other Contractor.

37. Quantities of Estimate

Wherever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

38. Lands and Rights-of-Way

Prior to the start of construction, the Owner shall obtain all lands and rights-of-way necessary for the carrying out and completion of work to be performed under this contract.

39. General Guaranty

Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the Owner, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The Owner will give notice of observed defects with reasonable promptness.

40. Conflicts, Measurements and Discrepancies

- a. Before undertaking each part of the work, the Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The Contractor shall promptly report in writing to Engineer any conflict, error or discrepancy which the Contractor may discover and shall obtain a written interpretation or clarification from the Engineer before proceeding with any work affected thereby; however, the Contractor shall not be liable to the Owner or Engineer for failure to report any conflict, error or discrepancy in the Contract Documents, unless the Contractor had actual knowledge thereof or should reasonably have known thereof.
- b. Any work performed which is governed by conflicting details, dimensions, or specifications and is performed without clarification by the Engineer shall be at the sole risk of the Contractor.

- c. No extra charge or compensation in excess of actual quantities required will be allowed because of differences between actual dimensions and the dimensions shown on the drawings.

41. Notice and Service Thereof

Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the said Contractor at his last given address, or delivered in person to said Contractor or his authorized representative on the work.

42. Provisions Required by Law Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein. If, through mistake or otherwise any such provision is not inserted or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

43. Protection of Lives and Health

The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and health regulations described in Chapter XIII, Bureau of Labor Standards, Department of Labor, Safety and Health Regulations for Construction, shall be observed and the Contractor shall take or cause to be taken, such additional safety and health measures as the Owner may determine to be reasonably necessary.

44. Subcontracts

The Contractor will insert in any subcontracts, any Federal Labor Standards Provisions which may be contained herein and such other clauses as the Owner and the Department of Housing and Urban Development may, by instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

45. Equal Employment Opportunity

During the performance of this contract, the Contractor agrees as follows:

- a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, sex, color, disability, age or national origin. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion,

sex, color, age or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, (including apprenticeship). The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided of this nondiscrimination clause.

- b. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, sex, color, disability, age or national origin.
- c. The Contractor will send to each labor union or representative or workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the labor union or worker's representative of the Contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- e. The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Department of Housing and Urban Development and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- f. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be terminated or suspended in whole or in part and the Contractor may be declared ineligible for further CITY contracts or Federally-assisted construction contracts, in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- g. The Contractor will include the provisions of paragraph (a) through (f) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Department of Housing and Urban Development may direct as means of enforcing such provisions including sanctions for noncompliance; provided,

however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department of Housing and Urban Development, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

46. Prohibited Interests

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

47. Use and Occupancy Prior to Acceptance by Owner

The Contractor agrees to the use and occupancy of a portion or unit of the project before formal acceptance by the Owner, provided the Owner:

- a. Secures written consent of the Contractor except in the event, in the opinion of the Engineer, the Contractor is chargeable with unwarranted delay in final clean-up of punch list items or other contract requirements, and
- b. Secures endorsement from the insurance carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction, or,
- c. When the project consists of more than one building, and one of the buildings is occupied, secures permanent fire and extended coverage insurance, including a permit to complete construction. Consent of the surety must also be obtained.

48. Photographs of the Project

If required by the Owner, the Contractor shall furnish photographs of the project, in the quantities and as described in the Special Provisions.

49. Suspension of Work

Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason

of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

50. Labor Provisions

a. Minimum Wages

All laborers and mechanics employed upon the work covered by this Contract shall be paid unconditionally and not less often than once each week, and without subsequent deduction or rebate of any account (except such payroll deductions as are made mandatory by law and such other payroll deductions as are permitted by the applicable regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to the Anti-Kickback Act hereinafter identified), the full amount due at time of payment computed at wage rates not less than those contained in the wage determination decision of said Secretary of Labor (a copy of which is attached and herein incorporated by reference), regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics. All laborers and mechanics employed upon such work shall be paid in cash, except that payment may be by check if the employer provides or secures satisfactory facilities approved by the Owner for the cashing of the same without cost or expense to the employee. For the purpose of this clause, contributions made or costs reasonably anticipated under Section 1 (b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section 5.5(a)(1)(iv) of Title 29, Code of Federal Regulations. Also for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds, or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

b. Underpayment of Wages or Salaries

In case of underpayment of wages by the Contractor or by any subcontractors to laborers or mechanics employed by the Contractor or subcontractor upon the work covered by this Contract, the Owner in addition to such other rights as may be afforded it under this Contract, shall withhold from the Contractor, out of any payments due the Contractor, so much thereof as the Owner may consider necessary to pay such laborers or mechanics the full amount of wages required by this Contract. The amount so withheld may be disbursed by the Owner, for and on account of the Contractor or the subcontractor (as may be appropriate), to the respective laborers or mechanics to whom the same is due or on their behalf prescribed in the applicable wage determination.

c. Anticipated Costs of Fringe Benefits

If the Contractor does not make payments to a trustee or other third person, he may consider as part of the wages of any laborer or mechanic the amount of any costs

reasonably anticipated in providing fringe benefits under a plan or program of a type expressly listed in the wage determination decision of the Secretary of Labor which is part of this Contract; provided, however, the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account asset for the meeting of obligations under the plan or program. A copy of findings made by the Secretary of Labor in respect to fringe benefits being provided by the Contractor must be submitted to the Owner with the first payroll filed by the Contractor subsequent to receipt of the findings.

d. Overtime Compensation Required by Contract Works Hours and Safety Standards Act (76 Stat. 357-360: Title 40 U.S.C., Sections 327-332).

(1) Overtime Requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, which he is employed on such work to work in excess of 40 hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of 40 hours in such work week.

(2) Violation/Liability for Unpaid Wages Liquidated Damages. In the event of any violation of the clause set forth in paragraph (1), the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for his unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violations of the clause set forth in paragraph (1), in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in paragraph (1).

(3) Withholding for Liquidated Damages. The Owner shall withhold or cause to be withheld, from any monies payment on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for liquidated damages as provided the clause set forth in paragraph (2).

(4) Subcontracts. The Contractor shall insert in any subcontracts the clauses set forth in paragraphs (1), (2), and (3) of this Section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontractors which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

e. Employment of Apprentices/Trainees

(1) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed and individually registered in a bona fide apprenticeship program registered with the

U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the contractor as to his entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not a trainee as defined in subdivision (2) of this subparagraph or is not registered or otherwise employed as stated above, shall be paid the wage rates determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish to the contracting officer or a representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the registration of his program and apprentices as well as the appropriate ratios and wage rates (expressed in percentages of the journeyman hourly rates), for the areas of construction prior to using any apprentices on the contract work. The wage rate paid apprentices shall be not less than the appropriate percentage of the journeyman's rate contained in the applicable wage determination.

- (2) Trainees. Except as provided in 29 CFR 5.15, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidence by formal certification, by the U.S. Department of Labor, Manpower Administration, Bureau of Apprentice and Training. The ratio of trainees to journeymen shall not be greater than permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Bureau of Apprenticeship and Training shall be paid not less than the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish the contracting officer or a representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the certification of his program, the registration of the trainees, and the ratios and wage rates prescribed in that program. In the event the Bureau of Apprenticeship and Training withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (3) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment

opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

f. Employment of Certain Persons Prohibited

No person under the age of sixteen or no person who, at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this Contract.

g. Regulations Pursuant to So-Called "Anti-Kickback Act"

The Contractor shall comply with the applicable regulations (a copy of which is attached and herein incorporated by reference) of the Secretary of Labor, United States Department of Labor, made pursuant to the so-called "Anti-Kickback Act" of June 13, 1934 (48 Stat. 948; 62 Stat. 862; Title 18 U.S.C., Section 874; and Title 40 U.S.C., Section 276c), and any amendments or modifications thereof, shall cause appropriate provisions to be inserted in subcontracts to insure compliance therewith by all subcontractors subject thereto, and shall be responsible for the submission of affidavits required by subcontractors thereunder, except as said Secretary of labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions from the requirement thereof.

h. Employment of Laborers or Mechanics Not Listed in Aforesaid Wage Determination Decision

Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the Contract will be classified or reclassified comfortably to the wage determination by the Owner, and a report of the action taken shall be submitted by the Owner, through the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question accompanied by the recommendation of the Owner shall be referred, through the Secretary of Housing and Urban Development, to the Secretary of Labor for final determination.

i. Fringe Benefits Not Expressed as Hourly Wages Rates

The Owner shall require, whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly wage rate and the Contractor is obligated to pay cash equivalent of such a fringe benefit, an hourly cash equivalent thereof to be established. In the event the interested parties cannot agree upon a cash equivalent of the fringe benefit, the questions, accompanied by the recommendation of the Owner, shall be referred, through the Secretary of Housing and Urban Development, to the Secretary of Labor for determination.

j. Posting Wage Determination Decisions and Authorized Wage Deductions

The applicable wage poster of the Secretary of Labor, United States Department of Labor, and the applicable wage determination decisions of said Secretary of Labor with respect to the various classification of laborers and mechanics employed and to be employed upon the work covered by this Contract, and a statement showing all deductions, if any, in accordance with the provisions of this Contract, to be made from wages actually earned by persons so employed or to be employed in such classifications, shall be posted at appropriate conspicuous points at the site of the work.

k. Complaints, Proceedings, or Testimony by Employees

No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contractor to his employer.

l. Claims and Disputes Pertaining to Wages

Claims and disputes pertaining to wage rates or to classifications of laborers and mechanics employed upon the work covered by this Contractor shall be promptly reported by the Contractor in writing to the Owner for referral by the latter through the Secretary of Housing and Urban Development to the Secretary of Labor, United States Department of Labor, whose decision shall be final with respect thereto.

m. Questions Concerning Certain Federal Statutes and Regulations

All questions arising under this Contract which relate to the application or interpretation of (a) the aforesaid Anti-Kickback Act, (b) the Contract Work Hours and Safety Standards Act, (c) the aforesaid Davis-Bacon Act, (d) the regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to said Acts, or (e) the labor standards provisions of any other pertinent Federal statute, shall be referred, through the Owner and the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor, for said Secretary's appropriate ruling or interpretation which shall be authoritative and may be relied upon for the purposes of this Contract.

n. Payrolls and Basic Payroll Records of Contractor and Subcontractors

The Contractor and each subcontractor shall prepare his payroll on forms satisfactory to and in accordance with instructions to be furnished by the Owner. The Contractor shall submit weekly to the Local Public Agency or Public Body two certified copies

of all payrolls of the Contractor and of the subcontractors, it being understood that the Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. Each such payroll shall contain the "Weekly Statement of Compliance" set forth in Section 3.3 of Title 29, Code of Federal Regulations. The payrolls and basic payroll records of the Contractor and each subcontractor covering all laborers and mechanics employed upon the work covered by this Contract shall be maintained during the course of the work and preserved for a period of three (3) years thereafter. Such payroll and basic payroll records shall contain the name and address of each such employee, his correct classification, rate of pay (including rates of contributions or costs anticipated of the types described in Section 1(b)(2) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. In addition, whenever the Secretary of Labor has found under Section 5.5(a)(1)(iv) of Title 29, Code of Federal Regulations, that the wages of any laborer or mechanic includes the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the Contractor or subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. The Contractor and each subcontractor shall make his employment records with respect to persons employed by him upon the work covered by this Contract available for inspection by authorized representatives of the Secretary of Housing and Urban Development, the Owner, and the United States Department of Labor. Such representative shall be permitted to interview employees of the Contractor or of any subcontractor during working hours on the job.

o. Specific Coverage of Certain Types of Work by Employees

The transporting of materials and supplies to or from the site of the Project to which this Contract pertains by the employees of the Contractor or of any subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the Project to which this Contract pertains by persons employed by the Contractor or by any subcontractor, shall, for the purposes of this Contract, and without limiting the generality of the foregoing provisions of this Contract, be deemed to be work to which these, Federal Labor Standards Provisions are applicable.

p. Provisions to be Included in Certain Subcontracts

The Contractor shall include or cause to be included in each subcontract covering any of the work covered by this Contract, provisions which are consistent with any Labor Standards Provisions, included herein and also a clause requiring the subcontractors to include such provisions in any lower tier subcontracts which they may enter into, together with a clause requiring such insertion in any further subcontracts that may in turn be made.

q. Ineligible Subcontractors

The Contractor shall not subcontract any part of the work covered by this Contract or permit subcontracted work to be further subcontracted without the Owner's prior written approval of the subcontractor. The Owner will not approve any subcontractor for work covered by this Contract who is at the time ineligible under the provisions of any applicable regulations issued by the Secretary of Labor, United States Department of labor or the Secretary of Housing and Urban Development, to receive an award of such subcontract.

(1) Breach of Foregoing Federal Labor Standards Provisions

In addition to the clauses for termination of this Contract as herein elsewhere set forth, the Owner reserves the right to terminate this Contract if the Contractor or any subcontractor whose subcontract covers any of the work covered by this Contract shall breach any of these Federal Labor Standards Provisions. A breach of these Federal Labor Standards Provisions may also be grounds for debarment as provided by the applicable regulations issued by the Secretary of Labor, United States Department of Labor.

r. Employment Practices

The Contractor shall, to the greatest extent practicable, follow hiring and employment practices for work on the project that will provide new job opportunities for the unemployed and underemployed. This clause shall be inserted in each construction subcontract.

s. Contract Termination; Debarment

A breach of Section 45 and the Federal Labor Standards Provisions may be grounds for termination of the Contractor, and for debarment as provided in 29 CFR 5.6.

51. Sales Tax Exemption

Pursuant to Oklahoma Statutes, Title 68, 1356(10), Contractors and Subcontractors shall be exempted from the tax levied on the sale of tangible personal property or services necessary for the completion of this construction contract. Any Contractor or Subcontractor making purchases for this contract on behalf of the City of Moore shall certify, in writing, on the copy of the invoice or sales ticket to be retained by the vendor, that the purchases are made for and on behalf of the City of Moore.

Contractors and Subcontractors shall request a written Sales Tax Exemption by contacting the Engineering Division, City of Moore, at 212 S.W. 9th Street, Moore, Oklahoma, 73160-5130 (405.793.5020) who will issue such exemption on an individual project basis. It shall be the Contractor's and Subcontractor's responsibility to secure the

Sales Tax Exemption and failure to do so will not lessen their liability for payment of the sales tax.

Until the City of Moore accepts the improvements, purchases for carrying out the contract for construction of this project shall be exempt from sales taxes as provided in the cited statute. Two Tax Commission interpretations of the Oklahoma statutes Title 68 Sec 1356(10) are listed below to avoid contention among the City of Moore, its contractors, and the Tax Commission.

"Exemptions apply to materials incorporated into the project, but not to concrete forms nor to other tools"

"The same reasoning precludes exemptions being applied to rental items"

The Contractor shall certify that purchases are made for or are on behalf of the City of Moore. Persons who make wrongful or erroneous certifications) shall be guilty of a misdemeanor and shall be punished as provided in the statutes.

52. Special Equal Opportunity Provisions

a. Activities and Contracts Not Subject to Executive Order 11246, as Amended.

(Applicable to Federally assisted construction contracts and related subcontracts under \$10,000.)

During the performance of this contract, the Contractor agrees as follows:

- (1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation; and selection of training, including apprenticeship.
- (2) The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by Contracting Officer setting forth the provisions of this nondiscrimination clause. The Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) Contractors shall incorporate foregoing requirements in all subcontracts.

b. Contracts Subject to Executive Order 11246, as Amended.

(Applicable to Federally assisted construction contracts and related subcontracts exceeding \$10,000.)

During the performance of this contract, the Contractor agrees as follows:

- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.
- (2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- (3) The Contractor shall send to each labor union or representatives of works with which he has a collective bargaining agreement or other contract or understanding, notice to be provided by the Contract Compliance Officer advising the said labor union or worker's representatives of the Contractor's commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Contractor shall comply with all provisions of Executive Order 11246 of September 24, 1965, and the rules, regulations and relevant orders of the Secretary of Labor.
- (5) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the Department and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- (6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract, or with any of such rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contract procedures authorized in Executive Order 11246, of September 24, 1965, or by rule, regulation, order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the portion of the sentence immediately preceding Paragraph (1) and the provisions of Paragraph (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

c. "Section 3 Compliance in the Provision of Training, Employment and Business Opportunities."

During the performance of this contract, the contractor agrees as follows:

- (1) The Contractor agrees to comply with the requirements of Section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701 u.), as amended, the HUD regulations issued pursuant thereto at 24 CFR Part 135, and any applicable rules and orders of HUD issued thereunder.
- (2) The "Section 3 clause" set forth in 24 CFR 135.20(b) shall form part of this contract, as set forth in Paragraph 1 of the General Conditions, "Contract and Contract Documents".
- (3) Contractor shall incorporate the "Section 3 clause" shown below and the foregoing requirements in all subcontracts.

Section 3 Clause as Set Forth in CFR 135.20(b)

- i. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible, opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns that are located in, or owned in substantial part by persons residing in the area of the project.
- ii. The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135.20, and all applicable rules and orders of the Department issued thereunder prior to the

execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability that would prevent them from complying with these requirements.

- iii. The Contractor will send to each labor organization or representative of workers with whom he has a collective bargaining agreement or other contract or understanding. If any, a notice advising the said labor organization or workers' representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
- iv. The Contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR 135.20. The Contractor will not subcontract with any subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR 135.20 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
- v. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR 135.20, and all applicable rules and regulations of the Department issued thereunder prior to the execution of the contract shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance. Failure to fulfill these requirements shall subject the applicant or recipient, its contractor and subcontractors, its successors, and assigns to these sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified by 24 CFR 135.20.

53. Certification of Compliance with Air and Water Acts

(Applicable to Federally assisted construction contracts and related subcontracts exceeding \$100,000.)

Compliance with Air and Water Acts

During the performance of this contract, the contractor and all subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et. seq., the Federal Water Pollution Control Act, as amended, 33 USC 1251 et. seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 14, as amended.

In addition to the foregoing instruments, all nonexempt contractors and subcontractors shall furnish to the Owner, the following:

- a. A stipulation by the contractor or subcontractor, that any facility to be utilized in the performance of any nonexempt contract or subcontract, is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.
- b. Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended (33 USC 1318) relating to inspection, monitoring, entry reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
- c. A stipulation that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility, utilized, or to be utilized for the contract, is under consideration to be listed on the EPA List of Violating Facilities.
- d. Agreement by the Contractor that he will include, or cause to be included, the criteria and requirements in Paragraph (1) through (4) of this section in every non exempt subcontract and requiring that the Contractor will take such action as the Government may direct as a means of enforcing such provisions.

54. Employment of Handicapped Persons

Where possible, employment of handicapped persons is encouraged.

55. Employment of Female Persons

Where possible, employment of female persons is encouraged.

56. Employment of Veterans

The contractor agrees to provide certification that special consideration with existing applicable collective bargaining agreements and practices, shall be given to the employment on the project of qualified disabled veterans as defined in 38 USC 2011(1), and to qualified Vietnam-era veterans, as defined in 38 USC 2011(2)(A).

WORK ORDER

TO: _____

From: City of Moore

Re: BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003

Date: _____

You are hereby notified that all contract documents have been entered and accepted in relation to the contract entered into on the ____ day of _____, 2025, by and between the City of Moore and _____ that work may now be commenced in accordance with said contract.

Authorized by:

Effective Date: _____

**AFFIDAVIT FOR PAYMENTS FOR \$25,000 OR MORE
CITY OF MOORE, OKLAHOMA**

STATE OF OKLAHOMA }
COUNTY OF CLEVELAND }

The undersigned (architect, contractor, supplier or engineer), of lawful age, being first duly sworn, on oath says that this invoice or claim is true and correct. Affiant further states that the (work, services or materials) as shown by this invoice or claim have been (completed or supplied) in accordance with the plans, specifications, orders or requests furnished the affiant. Affiant further states that (s)he has made no payment directly or indirectly to any elected official, officer or employee of the State of Oklahoma, any county or local subdivision of the state, of money or any other thing of value to obtain payment.

(Contractor)

Subscribed and sworn to before me this _____ day of _____, 2025.

Notary Public

My Commission Expires:

Note: Copy of this Affidavit must be attached to any invoice submitted by an Architect, Contractor, Engineer or Supplier of material for \$25,000 or more.

PAYMENT CERTIFICATE

TO: City of Moore

Re: **BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003**

I, _____ of
Name of Authorized Agent and Designation

_____ do hereby affirm that all claims and Company obligations incurred by me or in my behalf in connection with the performance of the above mentioned project have been fully paid and settled.

Authorized Representative

Name of Company

**STATE OF OKLAHOMA }
COUNTY OF CLEVELAND }**

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this ___ day of _____, 2025, personally appeared _____, (name) to me known to be the identical person who signed the name of _____, corporation/proprietorship/authorized agent name) an Oklahoma corporation, to the within and foregoing instrument as its _____, (president/owner) and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of said Corporation/Company for uses and purposes therein set forth.

Witness my hand and seal the day and year last above written.

Notary Public

My Commission Expires: _____

CONTRACTOR’S RELEASE TO CITY

TO: City of Moore

Re: **BUCK THOMAS PARK RESTROOM FACILITIES, PROJECT No. 2026-003**

This is to certify that _____, by acceptance of this final payment, hereby releases the owner, City of Moore, from all claims and all liabilities to the City of Moore for all things done or furnished in connection with work on this project and further releases said City of Moore from liabilities arising from any act of the owner or his agent arising in connection with this project. This release in no way operates to release the contractor or his Surety from any obligations under this contract or the bond tendered pursuant thereto.

Name of Corporation

Authorized Agent

**STATE OF OKLAHOMA }
COUNTY OF CLEVELAND}**

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this ___ day of _____, 2025, personally appeared _____, (name) to me known to be the identical person who signed the name of _____, 0(business/proprietorship/authorized agent name), an Oklahoma corporation/proprietorship, to the within and foregoing instrument as its _____ (president/owner), and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of said Corporation/ Company for uses and purposes therein set forth.

Witness my hand and seal the day and year last above written.

Notary Public

My Commission Expires: _____

SUBCONTRACTOR'S

WAIVER AND RELEASE OF LIEN UPON FINAL PAYMENT

The undersigned subcontractor or material/equipment supplier, in consideration of the final payment in the amount of \$ _____, hereby waives and releases its lien, and right to claim a lien for labor, services, or materials furnished to _____ (contractor) on the job of 2026-003 Buck Thomas Park Restroom Facilities for the City of Moore, Cleveland County, Oklahoma (Owner).

The said subcontractor or material/equipment supplier has been fully satisfied and paid any and all claims for labor and materials/equipment insofar as they pertain to the "Project" in question.

In further consideration of the payment made and set forth, the undersigned certifies that all of its subcontracts or material/equipment suppliers and employees on the project have already been paid and the undersigned agrees to indemnify and hold completely harmless _____ (contractor) in the event of any claims hereafter made alleging non-payment by such subcontractors or material/equipment suppliers or employees.

Date: _____

Subcontractor/Supplier

By: _____ (Print Name)

(Signature) _____ (Title)

State of _____ County of _____

Subscribed and sworn to before me on this _____ day of _____, 2025

Notary Public My commissions expire: _____

My commission number: _____

**SECTION 00 0101
PROJECT TITLE PAGE**

**PROJECT MANUAL FOR
BUCK THOMAS PARK RESTROOM FACILITIES
ARCHITECT'S PROJECT NUMBER: 2221
CITY OF MOORE PROJCT NUMBER: 2026-003**

**1903 NW 12TH STREET
MOORE , OKLAHOMA 73160
DATE: 10/09/2025
PREPARED BY: TAP ARCHITECTURE**

END OF SECTION

**SECTION 00 0102
PROJECT INFORMATION**

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

- A. Project Name: Buck Thomas Park Restroom Facilities, Project No. 2026-003, located at 1903 NW 12TH Street Moore, Oklahoma 73160.
- B. The Owner, hereinafter referred to as City of Moore

1.02 NOTICE TO PROSPECTIVE BIDDERS

- A. These documents constitute an Invitation to Bid to and request for qualifications from General Contractors (AIA A305) for the construction of the project described below.

1.03 PROJECT DESCRIPTION

- A. Summary Project Description: Provide construction for two new restroom buildings that consist of mens and womens restrooms, family restroom and electrical room.

1.04 PROCUREMENT TIMETABLE

- A. Qualifications Due Date: November 15, before 2:00 PM local time.
1 copy to be submitted to TAP Architecture and 1 copy to the City of Moore.
- B. Last Request for Substitution Due: 4 days prior to due date of bids.
- C. Last Request for Information Due: 4 days prior to due date of bids.
- D. The City of Moore reserves the right to change the schedule or terminate the entire procurement process at any time.

1.05 PROCUREMENT DOCUMENTS

- A. Availability of Documents: Complete sets of procurement documents may be obtained:
 - 1. From GRI Reprographics.
 - 2. At the following address: 7001 N. Santa Fe Ave., Oklahoma City 73116.
 - 3. Cost: \$25 per physical set and \$0 per digital set.
- B. Documents may be viewed at Dodge Global Network, Southwest Construction News Service, Construct Connect.
 - 1. Dodge Global Network, (800) 393-6343
 - 2. Southwest Construction News Service, (405) 948-7474
 - 3. Construct Connect, (513) 645-8004

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 00 0110
TABLE OF CONTENTS**

**CITY OF MOORE – CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS FOR BUCK
THOMAS PARK RESTROOM FACILITIES: PROJECT NO. 2026-003**

PROCUREMENT AND CONTRACTING REQUIREMENTS

1. Contract Documents and Technical Specifications – City of Moore Cover
2. Notice to Bidders
3. City of Moore Contract Documents; Table of Contents
4. Solicitation for Bids
5. Information for Bidders
6. Bidding Documents
7. Contract
8. Performance Bond
9. Statutory Bond
10. Maintenance Bond
11. General Conditions Contents
12. General Conditions
13. Forms
 - a. Work Order
 - b. Affidavit for Payments for \$25,000 or More
 - c. Payment Certificate
 - d. Contractor’s Release to City
 - e. Subcontractor’s Waiver and Release of Lien Upon Final Payment

1.01 DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

- A. 00 0101 - Project Title Page
- B. 00 0102 - Project Information
- C. 00 0110 - Table of Contents
- D. 00 0115 - List of Drawing Sheets
- E. 00 2114 - Sample AIA A305
- F. 00 3100 - Available Project Information
- G. 00 4336 - Proposed Subcontractors Form
- H. 00 5000 - Contracting Forms and Supplements
- I. 00 7200 - General Conditions
- J. 00 7300 - Supplementary Conditions

SPECIFICATIONS

2.01 DIVISION 01 -- GENERAL REQUIREMENTS

- A. 01 1000 - Summary
- B. 01 2000 - Price and Payment Procedures
- C. 01 2500 - Substitution Procedures
- D. 01 2500F - Product Substitution Form

- E. 01 3000 - Administrative Requirements
- F. 01 4000 - Quality Requirements
- G. 01 5000 - Temporary Facilities and Controls
- H. 01 6000 - Product Requirements
- I. 01 6116 - Volatile Organic Compound (VOC) Content Restrictions
- J. 01 7000 - Execution and Closeout Requirements
- K. 01 7419 - Construction Waste Management and Disposal
- L. 01 7800 - Closeout Submittals
- M. 01 7900 - Demonstration and Training

2.02 DIVISION 02 -- EXISTING CONDITIONS

- A. 02 4100 - Demolition

2.03 DIVISION 03 -- CONCRETE

- A. 03 0516 - Underslab Vapor Barrier - Stego Industries
- B. 03 1000 - Concrete Forming and Accessories
- C. 03 2000 - Concrete Reinforcing
- D. 03 3000 - Cast-in-Place Concrete
- E. 03 3511 - Concrete Floor Sealer

2.04 DIVISION 04 -- MASONRY

- A. 04 2000 - Unit Masonry

2.05 DIVISION 05 -- METALS

- A. 05 5000 - Metal Fabrications

2.06 DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES

- A. 06 1000 - Rough Carpentry
- B. 06 1753 - Fabricated Wood Trusses

2.07 DIVISION 07 -- THERMAL AND MOISTURE PROTECTION

- A. 07 2100 - Thermal Insulation
- B. 07 4113 - Metal Roof Panels
- C. 07 6200 - Sheet Metal Flashing and Trim
- D. 07 9200 - Joint Sealants

2.08 DIVISION 08 -- OPENINGS

- A. 08 1113 - Hollow Metal Doors and Frames
- B. 08 7100 - Door Hardware

2.09 DIVISION 09 -- FINISHES

- A. 09 2116 - Gypsum Board Assemblies
- B. 09 9000 - Painting and Coating

2.10 DIVISION 10 -- SPECIALTIES

- A. 10 1400 - Signage
- B. 10 2113 - Plastic Toilet Compartments
- C. 10 2800 - Toilet, Bath, and Laundry Accessories
- D. 10 4416 - Fire Extinguishers

2.11 DIVISION 11 -- EQUIPMENT

2.12 DIVISION 12 -- FURNISHINGS

- 2.13 DIVISION 13 -- SPECIAL CONSTRUCTION**
- 2.14 DIVISION 14 -- CONVEYING EQUIPMENT**
- 2.15 DIVISION 21 -- FIRE SUPPRESSION**
- 2.16 DIVISION 22 -- PLUMBING**
 - A. Refer Sheet P701 for Plumbing Specifications
- 2.17 DIVISION 23 -- HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)**
 - A. Refer Sheet M701 for HVAC Specifications
- 2.18 DIVISION 25 -- INTEGRATED AUTOMATION**
- 2.19 DIVISION 26 -- ELECTRICAL**
 - A. Refer Sheet E701 for Electrical Specifications
- 2.20 DIVISION 27 -- COMMUNICATIONS**
- 2.21 DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY**
- 2.22 DIVISION 31 -- EARTHWORK**
 - A. 31 1000 - Site Clearing
 - B. 31 2000 - Earth Moving
 - C. 31 3116 - Termite Control
- 2.23 DIVISION 32 -- EXTERIOR IMPROVEMENTS**
- 2.24 DIVISION 33 -- UTILITIES**
- 2.25 DIVISION 34 -- TRANSPORTATION**
- 2.26 DIVISION 40 -- PROCESS INTEGRATION**
- 2.27 DIVISION 46 -- WATER AND WASTEWATER EQUIPMENT**

END OF SECTION

**SECTION 00 0115
LIST OF DRAWING SHEETS**

GENERAL: THE LIST OF DRAWINGS FOR THIS BID IS AS INDICATED ON THE BID SET TITLED "BUCK THOMAS PARK RESTROOM FACILITIES", DATED AS STAMPED 10/09/2025. REFER SHEET INDEX ON DRAWING SHEET G110.

END OF SECTION

 **AIA**® Document A305™ – 2020
Contractor's Qualification Statement

THE PARTIES SHOULD EXECUTE A SEPARATE CONFIDENTIALITY AGREEMENT IF THEY INTEND FOR ANY OF THE INFORMATION IN THIS A305-2020 TO BE HELD CONFIDENTIAL.

SUBMITTED BY:
(Organization name and address.)

SUBMITTED TO:
(Organization name and address.)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

TYPE OF WORK TYPICALLY PERFORMED

(Indicate the type of work your organization typically performs, such as general contracting, construction manager as constructor services, HVAC contracting, electrical contracting, plumbing contracting, or other.)

THIS CONTRACTOR'S QUALIFICATION STATEMENT INCLUDES THE FOLLOWING:

(Check all that apply.)

- Exhibit A – General Information
- Exhibit B – Financial and Performance Information
- Exhibit C – Project-Specific Information
- Exhibit D – Past Project Experience
- Exhibit E – Past Project Experience (Continued)

CONTRACTOR CERTIFICATION

The undersigned certifies under oath that the information provided in this Contractor's Qualification Statement is true and sufficiently complete so as not to be misleading.

Organization's Authorized Representative Signature **Date**

Printed Name and Title

NOTARY

State of:

County of:

Signed and sworn to before me this day of

Notary Signature

My commission expires:

SECTION 00 3100
AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of Contract Documents, as follows:
1. City Water and Sewer Maps
 2. City of Moore Fire Marshal Building Plan Transmittal Form – 12/06/2022
 3. Commercial Building Permit Application Form – 12/06/2022
 4. Construction Stormwater / Land Disturbance Permit Application
 5. Stormwater Pollution Prevention Plan (SWP3) form and requirements

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 00 4336
PROPOSED SUBCONTRACTORS FORM**

PARTICULARS

- 1.01 HEREWITH IS THE LIST OF SUBCONTRACTORS REFERENCED IN THE BID SUBMITTED BY:**
- 1.02 (BIDDER) _____**
- 1.03 TO (CITY OF MOORE): MOORE, OKLAHOMA**
- 1.04 DATED _____ AND WHICH IS AN INTEGRAL PART OF THE BID FORM.**
- 1.05 THE FOLLOWING WORK WILL BE PERFORMED (OR PROVIDED) BY SUBCONTRACTORS AND COORDINATED BY US:**

LIST OF SUBCONTRACTORS

WORK SUBJECT SUBCONTRACTOR NAME

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____
- H. _____
- I. _____
- J. _____
- K. _____

END OF SECTION

**SECTION 00 5000
CONTRACTING FORMS AND SUPPLEMENTS**

PART 1 GENERAL

1.01 CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID LICENSE TO USE ALL COPYRIGHTED DOCUMENTS SPECIFIED BUT NOT INCLUDED IN THE PROJECT MANUAL.

1.02 AGREEMENT AND CONDITIONS OF THE CONTRACT

A. See City of Moore, "Contract Document and Technical Specifications for Construction."

1.03 FORMS

A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in Contract Documents.

B. Bond Forms:

1. Bid Bond Form: AIA A310.
2. Performance and Payment Bond Form: AIA A312.

C. Post-Award Certificates and Other Forms:

1. Certificate of Insurance Form: ACORD Certificate of Insurance 25.
2. Schedule of Values Form: AIA G703.

D. Closeout Forms:

1. Certificate of Substantial Completion Form: AIA G704.

1.04 REFERENCE STANDARDS

- A. AIA A310 - Bid Bond; 2010.
- B. AIA A312 - Performance Bond and Payment Bond; 2010.
- C. AIA G703 - Continuation Sheet; 1992.
- D. AIA G704 - Certificate of Substantial Completion; 2017.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 00 7200
GENERAL CONDITIONS**

FORM OF GENERAL CONDITIONS

1.01 THE GENERAL CONDITIONS APPLICABLE TO THIS CONTRACT IS AVAILABLE FROM THE OWNER / GENERAL CONTRACTOR. SUPPLEMENTARY CONDITIONS REFERENCED ARE BASED ON USE OF AIA DOCUMENT A201, LATEST VERSION. INTENT OF SUPPLEMENTARY CONDITIONS REMAIN APPLICABLE TO OTHER GENERAL CONDITIONS WHICH MAY BE APPLICABLE TO CONTRACT USED BY OWNER UNLESS OTHERWISE MODIFIED IN CONTRACT WITH OWNER.

SUPPLEMENTARY CONDITIONS

2.01 REFER TO DOCUMENT 00 7300 - SUPPLEMENTARY CONDITIONS FOR AMENDMENTS TO THESE GENERAL CONDITIONS.

END OF SECTION

**SECTION 00 7300
SUPPLEMENTARY CONDITIONS**

INTENT

1.01 GENERAL

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 00 7200 and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

MODIFICATIONS TO AIA A201

2.01 REFERENCE STANDARDS

- A. AIA A201 - General Conditions of the Contract for Construction; 2017.
- B. AIA A312 - Performance Bond and Payment Bond; 2010.

2.02 ARTICLE 3.6 - TAXES

- A. Delete the article and add the following:
 - 1. "Article 3.6 TAXES: The Contractor shall exclude sales tax. The Contractor shall be designated as an agent of the Owner in accordance with the laws of the State in which the project is constructed. The Contractor shall execute with the Owner the "Designation of Purchasing Agent" on form provided by the Owner.
- B. For convenience of reference, a copy of the form is appended to this document.

2.03 ARTICLE 7.3 - CONSTRUCTION CHANGE DIRECTIVES

- A. Add the following subparagraph:
 - 1. 7.3.11: The Agreement identifies the overhead and profit fees applicable for Changes in the Work, whether additions to or deductions from the Work on which the Contract Sum is based and identifies the fees for subcontract work for changes (both additions and deductions) in the Work. The Contractor shall limit the fees as noted.

2.04 ARTICLE 8 - TIME

- A. Add the following subparagraph:
 - 1. 8.1.5: Contract Time commences at the Notice to Proceed and continues to the date of Substantial Completion.

2.05 ARTICLE 11.4 - PERFORMANCE, PAYMENT, AND MAINTENANCE BONDS

- A. Add the following subparagraph:
 - 1. 11.4.3: Bonds are required of the Contractor and may be required of the sub-contractors at the discretion of the Contractor. The cost of General Contractor bonds shall be included in the bid. The bond value requirements are as follows:
 - a. Provide a 100 percent Performance Bond on AIA A312.
 - b. Provide a 100 percent Payment and Materials Bond (Statutory Bond) on Owner's form.
 - c. Provide a 100 percent Defect Bond on Owner's form.
 - d. Deliver bonds within 3 days after execution of the Contract.
 - 2. For convenience of reference, a copy of the forms are appended to this document.

2.06 OTHER ITEMS TO BE ADD TO OR WHICH MODIFY GENERAL CONDITIONS

- A. Warranty period for the project shall be for one (1) year from the date of Substantial Completion except as otherwise modified by the various sections of the specifications.
- B. Subcontractors shall certify in writing to the General Contractor that their Record Drawings show complete and accurate "as-built" conditions in accordance with construction industry standards stating sizes, kinds of materials, vital piping, conduct locations, and similar matters.

Further all other writings, drawings or sketches reflecting changes in the work shall be included within the Record Drawings. Record Drawings shall be submitted to the Contractor prior to Substantial Completion.

- C. Coordinating services in connection with the Work of persons or entities retained by the Owner with respect to testing, landscaping, or other vendors including, without limitation, geotechnical and concrete testing, wiring with respect to telephone, computers, audio / visual and security system or any other items related to any of the foregoing or of a type similar to the foregoing shall not be deemed to be additional services subject to additional compensations.
- D. Substantial Completion: Work shall not be deemed to be substantially complete until such time as: (1) a Certificate of Occupancy has been issued by the City of Moore or its authorized agency; and (2) it is determined that the Work complies with all requirements of the Construction Documents, subject to adjustment as identified on the punch list developed for Substantial Completion.
- E. Ten Percent (10%) retainage will be held on all sub-contractor's payments and subsequently, the General Contractor's payments until Substantial Completion. The Owner may at his discretion reduce retainage to 5% upon 50% completion. At Substantial Completion, an amount shall be identified as required to complete the work based on the Substantial Completion Punch list and on the project Schedule of Values. That amount shall be doubled as final retention until Final Completion is achieved, with remaining funds in retention released. Substantial Completion retained funds shall then be released in accordance with the General Conditions of the Contract at Final Completion.
- F. Change Orders: sub-contractors maximum combined overhead and profit shall not exceed 15%.
 - 1. For the purpose of change orders, labor burden shall be defined as the extra cost of labor in addition to an employee's regular ACTUAL wages (not billing rate). Burden includes employer taxes, insurance, benefits, vacation time and other costs based on regular payroll wages and established company policies. It does not include employee withholding. Sub-Contractor shall identify the labor burden with appropriate documentation in their bidding documentation to the General Contractor and that burden shall apply to all changes in the work. The General Contractor shall identify the maximum allowable Labor Burden percentage and enter it in the appropriate location on the Bid Form.
 - a. Each subcontract to be entered into by the Contractor, shall contain provisions that:
 - (i) require that the Work to be performed under such subcontract shall be in accordance with the requirements of the Contract Documents; (ii) contain the waivers of subrogation rights as provided by the contractual agreement between the Contractor and the Owner; (iii) require that the subcontractor submit certificates and waivers of lien in a form and content satisfactory to Owner and Contractor for Work completed by it and its subcontractors as a condition to disbursement of payments required hereunder. (iv) Require that each subcontractor furnish to the Contractor in a timely fashion all information necessary for the preparation and submission of reports required herein; (v) require that each subcontractor continue to perform under its subcontract in the event that, as provided by the contractual agreement between the Contractor and the Owner, the Contractor is terminated and the Owner takes an assignment of such subcontract and requests that such subcontractor continue such performance; (vi) permit the Contractor to retain from payments due such subcontractors, the retainage described in the General Conditions, as amended by the Supplementary Conditions and the General Contractor's Contract for Construction, and (vii) if required by law, require each subcontractor to represent that it is an equal opportunity employer as provided by law.
 - b. All written warranties and guaranties shall be submitted to the Contractor prior to the date of Substantial Completion and shall be properly dated to commence on date of Substantial Completion, regardless of installation date. Warranty on new or

replacement items installed for the first time after the Substantial Completion date shall be dated from date of installation.

2.07 INSURANCE REQUIREMENTS

- A. The Contractor, prior to commencing the Work, except as otherwise noted, shall procure and purchase the following insurance from a company or companies lawfully authorized to do business in the State of Oklahoma.
- B. All General Conditions, Supplementary Conditions, and the Agreement for Construction shall be thoroughly studied prior to purchase of an insurance policy to cover the requirements of the project. Limits and conditions listed below shall be minimums and may be expanded by certain clauses of the Agreement. Both the Owner and Architect shall be named as additional insureds on the commercial General Liability Policy and the Umbrella Liability Policy and shall cover their employees, agents, or consultants on the jobsite. Waivers of Subrogation are required for both Property Insurance and Liability Insurance.
 - 1. Commercial General Liability (Occurrence basis):
 - a. General Aggregate Limit: \$2,000,000
 - b. Each Occurrence Limit: \$1,000,000
 - c. Products and Completed Operations Aggregate Limit: \$1,000,000
 - d. Personal Injury: \$1,000,000
 - 1) Business Auto Liability
 - (a) Combined Single Limit for Bodily Injury and Property Damage: \$1,000,000 (to included Owned, Hired and Non-Owned Auto)
 - 2) Workers Compensation / Employer's Liability
 - (a) Each accident - Statutory requirements but not less than \$100,000
 - (b) Disease Limit - Policy - Statutory requirements but not less than \$500,000
 - (c) Disease Limit - Each Employee - Statutory requirements but not less than \$100,000
 - 3) Builder's Risk Insurance
 - (a) In addition to the Contractor's Products and Completed Operations Aggregate Limit, the following shall also apply: The Owner shall purchase and maintain Builder's Risk Insurance.
 - (b) Policy shall be for full replacement value and shall remain in place until final acceptance of the project by the Owner.
 - 4) Other Insurance on Loss of Use
 - (a) The Owner, at the Owner's option, may purchase and maintain such insurance that will protect the Owner against loss of use of his property.

2.08 SPECIAL PROJECT REQUIREMENTS

- A. Successful Bidder shall be required to execute "Non-Kickback Affidavit" provided by the Owner in the Contract / Bidding Documents.
- B.

END OF SECTION

**SECTION 01 1000
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Buck Thomas Park Restroom Facilities
- B. Owner's Name: City of Moore.
- C. Architect's Name: TAP Architecture.
- D. The Project consists of demolition of two existing buildings and construction of two identical restroom facilities. The building will be CMU construction and consist of men's, women's and family restrooms and an electrical room.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 5000 – Contracting Forms and Supplements.

1.03 WORK BY OWNER

- A. Items noted NIC (Not in Contract) will be supplied and installed by City of Moore before Substantial Completion.

1.04 OWNER OCCUPANCY

- A. City of Moore intends to occupy the Project upon Substantial Completion.
- B. Cooperate with City of Moore to minimize conflict and to facilitate City of Moore's operations.
- C. Schedule the Work to accommodate City of Moore occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Provide access to and from site as required by law and by City of Moore:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
 - 3. Maintain site security and safety from adjacent park and protect public parking lot.

1.06 WORK SEQUENCE

- A. Coordinate construction schedule and operations with City of Moore.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 2000
PRICE AND PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

- A. Section 00 5000 - Contracting Forms and Supplements: Forms to be used.
- B. Section 00 7300 - Supplementary Conditions: Percentage allowances for Contractor's overhead and profit.

1.03 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to TAP Architecture for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to TAP Architecture for approval.
- C. Forms filled out by hand will not be accepted.
- D. Execute certification by signature of authorized officer.
- E. Submit one electronic and no hard-copies of each Application for Payment.
- F. Include the following with the application:
 - 1. Transmittal letter as specified for submittals in Section 01 3000.
 - 2. Construction progress schedule, revised and current as specified in Section 01 3000.
 - 3. Affidavits attesting to off-site stored products.
- G. When TAP Architecture requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, TAP Architecture will issue instructions directly to Contractor.
- B. For other required changes, TAP Architecture will issue a document signed by City of Moore instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, TAP Architecture will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01 7000.
 - 2. All systems are fully functional and per design drawings and specifications.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2500
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 - a. Unavailability.
 - b. Regulatory changes.
 - c. Requested by Owner.
 - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
 - a. Substitution requests offering advantages solely to the Contractor will not be considered.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to City of Moore.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Agrees to reimburse City of Moore and TAP Architecture for review or redesign services associated with re-approval by authorities.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
 - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. Forms included in the Project Manual are adequate for this purpose, and must be used.
- D. Limit each request to a single proposed substitution item.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Section 00 2113 - Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period, and the documents required.
- B. Submittal Form (before award of contract):
 - 1. Submit substitution requests by completing the form attached to this section. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):

1. Submit substitution requests by completing the form attached to this section. See this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. TAP Architecture will consider requests for substitutions only within 15 days after date of Agreement.
- C. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by TAP Architecture, in order to stay on approved project schedule.
- D. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by TAP Architecture, in order to stay on approved project schedule.
 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the City of Moore through cost savings, time savings, greater energy conservation, or in other specific ways.
 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
 3. Bear the costs engendered by proposed substitution of:
 - a. City of Moore's compensation to the TAP Architecture for any required redesign, time spent processing and evaluating the request.
- E. Substitutions will not be considered under one or more of the following circumstances:
 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
 2. Without a separate written request.

3.04 RESOLUTION

- A. TAP Architecture may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. TAP Architecture will notify Contractor in writing of decision to accept or reject request.
 1. TAP Architecture's decision following review of proposed substitution will be noted on the submitted form.

3.05 ACCEPTANCE

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.06 CLOSEOUT ACTIVITIES

- A. See Section 01 7800 - Closeout Submittals, for closeout submittals.

3.07 ATTACHMENTS

- A. A facsimile of the Substitution Request Form (During Construction) required to be used on the Project is included after this section.

END OF SECTION



SUBSTITUTE PRODUCT APPROVAL REQUEST FORM

****All substitutions must be approved prior to bid unless otherwise specifically allowed in a section****

Project Name: Buck Thomas Park Restroom Facilities Request Number: _____

Project No: (TAP No. 2221) BID DATE: _____

TO: Chris Teehee, Managing Director | Partner, cteehee@tapokc.com , 405.232.8787

FROM: _____

A proposed product is not approved and cannot be included in a bid or used in the Work until it appears in an Addendum or other Contract Modification Instrument as defined in the General Conditions. See Instructions To Bidders, General Conditions, and Section 01 6000. Include only one product substitution request on each form.

SUBSTITUTE PRODUCT INFORMATION:

Specification Section: No.: _____ Name: _____

Specified Product: _____

Substitute Product: _____

The Undersigned Submitter certifies:

1. Proposed product has been fully investigated and determined to be equal or superior in all respects to specified Product.
2. The same warranty will be furnished for the proposed product as for the specified Product.
3. Maintenance service offerings and availability of replacement parts is equivalent.
4. The proposed product will have no adverse effect on other trades and will not affect or delay the progress schedule.
5. The proposed product does not substantially change dimensions or required clearances and is comparable in function, capacity, size, quality, and aesthetic appearance to the specified product. (Architect remains the sole judge of acceptable aesthetic appearance).
 - a. Submitter agrees to reimburse the Owner for any charges by Consultants for review of substitution requests and adjustments required to modify Bidding and Construction Documents to incorporate the use of the substitute if applicable.

CHECK BELOW ONLY IF SUBSTITUTION IS PROPOSED DUE TO A PRODUCT COMPLICATION:

____ Specified product is no longer available from manufacturer and an equal product cannot be found. Proposed product will perform the function intended. Variations and effect of variations are identified on the line-item comparison sheet.

____ We have reviewed the site and have determined by our investigations that the specified product is not suitable for these field conditions. The substitute product will work as intended and can accommodate the field conditions.

Explain the complication:

ATTACHMENTS:

Include the following attachments -

1. Copy of the Project Manual Section where the proposed product would be specified, rewritten or red-lined to include any changes necessary to correctly specify the proposed equal product. Identify completely changes necessary to the original Project Manual Section.
2. Provide copies of details, elevations, cross-sections, and other elements of the Project Drawings redone as necessary to show changes necessary to accommodate proposed product. Identify completely the changes from the original Drawings.
3. Provide complete product literature and technical data, installation and maintenance instructions, test results, and other information required to show complete conformance with requirements of the Contract Documents.
4. Provide attached line item comparisons of product characteristics. Compare to a specified product.

By signature below, the submitter warrants the proposed substitute product is comparable in capacity, quality, size and aesthetic appearance to the specified product and will function properly for the intend use.

SIGNED: _____

Company _____

Address _____

City, State, Zip _____

Telephone _____ FAX _____

Email: _____

PROPOSED EQUAL PRODUCT: (Please repeat data from page 1):

Specification Section: No.: _____ Name: _____

Proposed Product: _____

Proposed Credit if submitting after the bid: \$ _____ Initial: _____

Submitter Additional Comments:

ARCHITECT'S REVIEW COMMENTS:

_____ Accepted. See Addenda Number _____.

_____ Submission is not in proper form or is missing data. Respond to comments and resubmit.

_____ Proposed Product not found acceptable. Use one of the approved Products.

_____ Not Reviewed. Submission received too late for proper review prior to bid.

BY: _____ **DATE:** _____

Title: _____



LINE ITEM COMPARISON SUBSTITUTE PRODUCT APPROVAL REQUEST FORM

SUBSTITUTE PRODUCT INFORMATION:

Specification Section: No.: _____ Name: _____

Specified Comparison Product: _____

Substitute Product: _____

Submitter is required to fill out this form and sign it. Duplicate as needed. Utilize the specified characteristics or the characteristics of a specified product to compare to the proposed substitute as required by “attachments” item 4:

CHARACTERISTIC DESCRIPTION	SPECIFIED	SUBSTITUTE	EQUALITY (+ = -)	Comments
Example:				
Film Thickness	40 mil	60 mil	+	Thicker
Composition	Rubber	Rubber	=	Same: monolithic
Width	54"	52"	-	No effect, same Number seams

Signed: _____

SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Electronic document submittal service.
- C. Preconstruction meeting.
- D. Progress meetings.
- E. Construction progress schedule.
- F. Coordination drawings.
- G. Submittals for review, information, and project closeout.
- H. Number of copies of submittals.
- I. Requests for Information (RFI) procedures.
- J. Submittal procedures.

1.02 REFERENCE STANDARDS

1.03 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to TAP Architecture:
 - 1. Requests for Information (RFI).
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
 - 1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
 - 2. Contractor and TAP Architecture are required to use this service.
 - 3. It is Contractor's responsibility to submit documents in allowable format.
 - 4. Subcontractors, suppliers, and TAP Architecture's consultants will be permitted to use the service at no extra charge.

5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Submittal Service: Use one of the following:
1. Service commonly used by the Contractor.
- C. Training: One, one-hour, web-based training session will be arranged for all participants, with representatives of TAP Architecture and Contractor participating; further training is the responsibility of the user of the service.
- D. Project Closeout: TAP Architecture will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for City of Moore.

3.02 PRECONSTRUCTION MEETING

- A. Schedule meeting after Notice of Award.
- B. Attendance Required:
1. City of Moore.
 2. TAP Architecture.
 3. Contractor.
- C. Agenda:
1. Execution of City of Moore-Contractor Agreement.
 2. Submission of executed bonds and insurance certificates.
 3. Distribution of Contract Documents.
 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 5. Designation of personnel representing the parties to Contract, the Contractor, Owner and TAP Architecture.
 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 7. Scheduling.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to TAP Architecture, City of Moore, participants, and those affected by decisions made.

3.03 PROGRESS MEETINGS

- A. Attendance Required:
1. Contractor.
 2. City of Moore.
 3. TAP Architecture.
 4. Contractor's superintendent.
 5. Major subcontractors.
- B. Agenda:
1. Review minutes of previous meetings.
 2. Review of work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems that impede, or will impede, planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Review of RFIs log and status of responses.
 7. Maintenance of progress schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progress during succeeding work period.

10. Maintenance of quality and work standards.
 11. Effect of proposed changes on progress schedule and coordination.
 12. Other business relating to work.
- C. Record minutes and distribute copies within two days after meeting to participants, with copies to TAP Architecture, City of Moore, participants, and those affected by decisions made.

3.04 CONSTRUCTION PROGRESS SCHEDULE

- A. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- B. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- C. Within 10 days after joint review, submit complete schedule.
- D. Submit updated schedule with each Application for Payment.

3.05 COORDINATION DRAWINGS

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. Review drawings prior to submission to TAP Architecture.

3.06 REQUESTS FOR INFORMATION (RFI)

- A. Definition: A request seeking one of the following:
 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 1. Prepare a separate RFI for each specific item.
 2. Prepare using software provided by the Electronic Document Submittal Service.
- D. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
- E. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- F. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
- G. Review Time: TAP Architecture will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
- H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to City of Moore.

3.07 SUBMITTAL SCHEDULE

- A. Submit to TAP Architecture for review a schedule for submittals in tabular format.

3.08 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:

1. Product data.
 2. Shop drawings.
 3. Samples for selection.
 4. Samples for verification.
- B. Submit to TAP Architecture for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.09 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
1. Design data.
 2. Certificates.
 3. Test reports.
 4. Inspection reports.
 5. Manufacturer's instructions.
 6. Manufacturer's field reports.
 7. Other types indicated.
- B. Submit for TAP Architecture's knowledge as contract administrator or for City of Moore.

3.10 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
1. Project record documents.
 2. Operation and maintenance data.
 3. Warranties.
 4. Bonds.
 5. Other types as indicated.
- D. Submit for City of Moore's benefit during and after project completion.

3.11 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by TAP Architecture.
1. After review, produce duplicates.
 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.12 SUBMITTAL PROCEDURES

- A. General Requirements:
1. Use a single transmittal for related items.
 2. Submit a separate package of submittals for review when included in separate specification sections.
 3. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.

4. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 5. When revised for resubmission, identify all changes made since previous submission.
- B. Samples Procedures:
1. Transmit related items together as single package.
 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

3.13 SUBMITTAL REVIEW

- A. Submittals for Review: TAP Architecture will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: TAP Architecture will acknowledge receipt and review. See below for actions to be taken.
- C. TAP Architecture's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. TAP Architecture's and consultants' actions on items submitted for review:
1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "Approved", or language with same legal meaning.
 - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
 - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
- E. TAP Architecture's actions on items submitted for information:
1. Items for which no action was taken:
 - a. "Received" - to notify the Contractor that the submittal has been received for record only.
 2. Items for which action was taken:
 - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION

SECTION 01 4000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Contractor's construction-related professional design services.
- F. Contractor's design-related professional design services.
- G. Control of installation.
- H. Mock-ups.
- I. Tolerances.
- J. Manufacturers' field services.
- K. Defect Assessment.

1.02 DEFINITIONS

- A. Contractor's Quality Control Plan: Contractor's management plan for executing the Contract for Construction.
- B. Contractor's Professional Design Services: Design of some aspect or portion of the project by party other than the design professional of record. Provide these services as part of the Contract for Construction.
 - 1. Design Services Types Required:

1.03 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:
 - 1. Investigation of soil conditions to support construction equipment.
 - 2. Design Services required to support the construction of the work..

1.04 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Base design on performance and/or design criteria indicated in individual specification sections.
- C. Scope of Contractor's Professional Design Services: Provide for the following items of work:
 - 1. Structural Design: Include calculations for resisting wind loads, dead loads and live loads, physical characteristics, resulting dimensional limitations as described in Section 06 1753 Fabricated Wood Trusses.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the City of Moore's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- C. Manufacturer's Field Reports: Submit reports for TAP Architecture's benefit as contract administrator or for City of Moore.

1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
- D. Erection Drawings: Submit drawings for TAP Architecture's benefit as contract administrator or for City of Moore.
1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

1.06 QUALITY ASSURANCE

- A. Testing Agency Qualifications:
1. Prior to start of work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.07 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from TAP Architecture before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of TAP Architecture shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.08 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. City of Moore will employ and pay for services of an independent testing agency to perform specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from TAP Architecture before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from TAP Architecture before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 TESTING AND INSPECTION

- A. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with TAP Architecture and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify TAP Architecture and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by TAP Architecture.
 - 6. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 - 4. Notify TAP Architecture and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 - 6. Arrange with City of Moore's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by TAP Architecture.
- E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.04 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.

- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.05 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.

END OF SECTION

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Security requirements.
- D. Vehicular access and parking.
- E. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES

- A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- B. Existing facilities may not be used.
- C. New permanent facilities may be used.
- D. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.04 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 FENCING

- A. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.06 SECURITY

- A. Provide security and facilities to protect Work, and City of Moore's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with City of Moore's security program.

1.07 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and City of Moore.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.08 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.

1.09 PROJECT IDENTIFICATION

- A. Provide project identification sign of design and construction indicated on drawings.
- B. Erect on site at location indicated.
- C. No other signs are allowed without City of Moore permission except those required by law.

1.10 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Transportation, handling, storage and protection.
- B. Product option requirements.
- C. Substitution limitations.
- D. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 4000 - Quality Requirements: Product quality monitoring.
- C. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.
- D. Section 01 7419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. See Section 01 4000 - Quality Requirements, for additional source quality control requirements.
- C. Use of products having any of the following characteristics is not permitted:
 - 1. Made of wood from newly cut old growth timber.
 - 2. Containing lead, cadmium, or asbestos.
- D. Where other criteria are met, Contractor shall give preference to products that:
 - 1. If used on interior, have lower emissions, as defined in Section 01 6116.
 - 2. If wet-applied, have lower VOC content, as defined in Section 01 6116.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 01 2500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 7419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 6116
VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements for Indoor-Emissions-Restricted products.
- B. Requirements for VOC-Content-Restricted products.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittal procedures.

1.03 DEFINITIONS

- A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
 - 1. Interior paints and coatings applied on site.
 - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
 - 3. Flooring.
 - 4. Composite wood.
 - 5. Products making up wall and ceiling assemblies.
 - 6. Thermal and acoustical insulation.
 - 7. Other products when specifically stated in the specifications.
- B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
 - 1. Interior paints and coatings applied on site.
 - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
- C. Interior of Building: Anywhere inside the exterior weather barrier.
- D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.
- F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
 - 1. Concrete.
 - 2. Clay brick.
 - 3. Metals that are plated, anodized, or powder-coated.
 - 4. Glass.
 - 5. Ceramics.
 - 6. Solid wood flooring that is unfinished and untreated.

1.04 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings; 2005 (Reapproved 2018).
- C. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2007.
- D. SCAQMD 1113 - Architectural Coatings; 1977 (Amended 2016).
- E. SCAQMD 1168 - Adhesive and Sealant Applications; 1989 (Amended 2017).

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

1.06 QUALITY ASSURANCE

- A. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Report of laboratory testing performed in accordance with requirements.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.
- B. VOC-Content-Restricted Products: VOC content not greater than required by the following:
 - 1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
 - 2. Joint Sealants: SCAQMD 1168 Rule.
 - 3. Paints and Coatings: Each color; most stringent of the following:
 - a. 40 CFR 59, Subpart D.
 - b. SCAQMD 1113 Rule.
 - c. CARB (SCM).

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

- A. City of Moore reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to City of Moore.
- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

END OF SECTION

SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Pre-installation meetings.
- C. Cutting and patching.
- D. Surveying for laying out the work.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of City of Moore personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 7900 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
 - 3. Submit surveys and survey logs for the project record.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of City of Moore or separate Contractor.

1.05 QUALIFICATIONS

- A. For surveying work, employ a land surveyor registered in Oklahoma and acceptable to TAP Architecture. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

1.06 PROJECT CONDITIONS

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.07 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.

- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After City of Moore occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of City of Moore's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify TAP Architecture four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:

1. Review conditions of examination, preparation and installation procedures.
 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to TAP Architecture, City of Moore, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify TAP Architecture of any discrepancies discovered.
- C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- D. Promptly report to TAP Architecture the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to TAP Architecture.
- F. Utilize recognized engineering survey practices.
- G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 2. Grid or axis for structures.
 3. Building foundation, column locations, and ground floor elevations.
- H. Periodically verify layouts by same means.
- I. Maintain a complete and accurate log of control and survey work as it progresses.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 1. Complete the work.
 2. Fit products together to integrate with other work.
 3. Provide openings for penetration of mechanical, electrical, and other services.
 4. Match work that has been cut to adjacent work.
 5. Repair areas adjacent to cuts to required condition.
 6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-complying work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.
- I. Patching:
 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 2. Match color, texture, and appearance.
 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.09 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- D. Verify that wiring and support components for equipment are complete and tested.
- E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- F. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.10 DEMONSTRATION AND INSTRUCTION

- A. See Section 01 7900 - Demonstration and Training.

3.11 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.12 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.
- F. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.13 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify TAP Architecture when work is considered ready for TAP Architecture's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for TAP Architecture's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing TAP Architecture's and Contractor's comprehensive list of items identified to be completed or corrected and submit to TAP Architecture.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to City of Moore-occupied areas.
- G. Notify TAP Architecture when work is considered finally complete and ready for TAP Architecture's Substantial Completion final inspection.
- H. Complete items of work determined by TAP Architecture listed in executed Certificate of Substantial Completion.

END OF SECTION

SECTION 01 7419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. City of Moore requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- E. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 01 3000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01 5000 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 01 6000 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 01 7000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

2.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, City of Moore, and TAP Architecture.
- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
 - 1. Prebid meeting.
 - 2. Preconstruction meeting.
 - 3. Regular job-site meetings.
- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
 - 1. Provide containers as required.
 - 2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
 - 3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION

**SECTION 01 7800
CLOSEOUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Individual Product Sections: Specific requirements for operation and maintenance data.
- C. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to TAP Architecture with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. For equipment, or component parts of equipment put into service during construction and operated by City of Moore, submit completed documents within ten days after acceptance.
 - 2. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with TAP Architecture comments. Revise content of all document sets as required prior to final submission.
 - 3. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with City of Moore's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Addenda.
 - 3. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by City of Moore.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 1. Description of unit or system, and component parts.
 2. Identify function, normal operating characteristics, and limiting conditions.
 3. Include performance curves, with engineering data and tests.
 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- E. Provide servicing and lubrication schedule, and list of lubricants required.
- F. Include manufacturer's printed operation and maintenance instructions.
- G. Include sequence of operation by controls manufacturer.
- H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- I. Additional Requirements: As specified in individual product specification sections.

3.05 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with City of Moore's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

END OF SECTION

**SECTION 01 7900
DEMONSTRATION AND TRAINING**

PART 1 GENERAL

1.01 SUMMARY

1.02 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures; except:
1. Make all submittals specified in this section, and elsewhere where indicated for commissioning purposes, directly to the Commissioning Authority.
 2. Submit one copy to the Commissioning Authority, not to be returned.
 3. Make commissioning submittals on time schedule specified by Commissioning Authority.
 4. Submittals indicated as "Draft" are intended for the use of the Commissioning Authority in preparation of overall Training Plan; submit in editable electronic format, Microsoft Word 2003 preferred.

1.03 QUALITY ASSURANCE

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Building demolition .

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- C. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- E. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- F. Section 31 2323 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

1.03 DEFINITIONS

- A. Demolition: Dismantle, raze, destroy or wreck any building or structure or any part thereof.
- B. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall where indicated.

1.04 REFERENCE STANDARDS

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Site Plan: Indicate:
 - 1. Areas for temporary construction and field offices.
 - 2. Areas for temporary and permanent placement of removed materials.
- C. Demolition Plan: Submit demolition plan as required by OSHA and local AHJs.
 - 1. Indicate extent of demolition, removal sequencing, bracing and shoring, and location and construction of barricades and fences.
 - 2. Summary of safety procedures.
- D. Demolition firm qualifications.
- E. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.06 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
 - 1. Minimum of five years of documented experience.

PART 3 EXECUTION

2.01 DEMOLITION

- A. Remove the entire building as indicated on sheet AD110.
- B. Remove all other paving and curbs within construction limits indicated on drawings.
- C. Within area of new construction, remove foundation walls and footings to minimum 3 feet (900 mm) below finished grade.
- D. Remove concrete slabs on grade within construction limits indicated on drawings.

- E. Remove other items indicated, for salvage, relocation, and recycling.
- F. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 312200.

2.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 5. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
 - 6. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
 - 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.
 - 1. Contractor is responsible for removing, storing and reinstalling all electrical, irrigation, security and lighting control panels located in existing building, to be installed in new building.
- D. Protect existing structures and other elements to remain in place and not removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
 - 4. Protect existing transformer from damage during demolition and construction.
- E. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

2.03 EXISTING UTILITIES

- A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone. Identify and mark, in same manner as other utilities to remain, utilities to be reconnected.

2.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

**SECTION 03 0516
UNDERSLAB VAPOR BARRIER**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sheet vapor barrier under concrete slabs on grade.

1.02 RELATED REQUIREMENTS

- A. Section 031000 - Concrete Forming and Accessories: Forms and accessories for formwork.
- B. Section 032000 - Concrete Reinforcing.
- C. Section 033000 - Cast-in-Place Concrete: Preparation of subgrade, granular fill, placement of concrete.

1.03 REFERENCE STANDARDS

- A. ASTM E1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs 2018a.
- B. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs 2017.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products.
- C. Test Data: Submit report of tests showing compliance with specified requirements.
- D. Samples: Submit samples of underslab vapor barrier to be used.
- E. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent construction.
- F. Summary of test results per paragraph 9.3 of ASTM E1745.
- G. Manufacturer's installation instructions for placement, seaming, penetration prevention and repair, and perimeter seal per ASTM E1643.
- H. All mandatory ASTM E1745 testing must be performed on a single production roll per ASTM E1745 Section 8.1.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Underslab Vapor Barrier:
 - 1. Water Vapor Permeance: Not more than 0.010 perms (0.6 ng/(s m² Pa)), maximum as tested in accordance with mandatory conditioning tests per ASTM E1745.
 - 2. Complying with ASTM E1745 Class A.
 - 3. Thickness: 15 mils (0.4 mm).
 - 4. Provide third party documentation that all testing was performed on a single production roll per ASTM E1745 Section 8.1
 - 5. Warranty:
 - a. Compliance with the designated ASTM E1745 classification and no manufacturing defects in the product for, at least, the life of the building.
 - 6. Basis of Design:
 - a. Stego Industries LLC; Stego Wrap Vapor Barrier (15-mil): www.stegoindustries.com/#sle.
- B. Accessory Products: Vapor barrier manufacturer's recommended tape, adhesive, mastic, etc., for sealing seams and penetrations in vapor barrier.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surface over which vapor barrier is to be installed is complete and ready before proceeding with installation of vapor barrier.

3.02 INSTALLATION

- A. Install vapor barrier in accordance with manufacturer's instructions and ASTM E1643.
- B. Install vapor barrier under interior slabs on grade; lap sheet over footings and seal to foundation walls.
- C. Lap joints minimum 6 inches (150 mm).
- D. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions.
- E. No penetration of vapor barrier is allowed except for reinforcing steel and permanent utilities.
- F. Repair damaged vapor retarder before covering with other materials. Per manufacturer's written instructions.

END OF SECTION

**SECTION 03 1000
CONCRETE FORMING AND ACCESSORIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Formwork for cast-in place concrete, with shoring, bracing and anchorage.
- B. Form accessories.
- C. Form stripping.

1.02 RELATED REQUIREMENTS

- A. Section 03 2000 - Concrete Reinforcing.
- B. Section 03 3000 - Cast-in-Place Concrete.

1.03 REFERENCE STANDARDS

- A. ACI 301 - Specifications for Structural Concrete; 2016.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

1.05 DELIVERY, STORAGE, AND HANDLING

PART 2 PRODUCTS

2.01 FORMWORK - GENERAL

- A. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
- B. Design and construct concrete that complies with design with respect to shape, lines, and dimensions.
- C. Comply with applicable state and local codes with respect to design, fabrication, erection, and removal of formwork.

2.02 WOOD FORM MATERIALS

- A. Form Materials: At the discretion of the Contractor.

2.03 FORMWORK ACCESSORIES

- A. Form Ties: Removable type, galvanized metal, fixed length, cone type, 1/2 inch back break dimension, free of defects that could leave holes larger than 1 inch in concrete surface.
- B. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bug holes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.
 - 1. Composition: Colorless, reactive, water-based or solvent-based compound.
 - 2. Do not use materials containing diesel oil or petroleum-based compounds.
 - 3. VOC Content: In compliance with applicable local, State, and federal regulations.
 - 4. Products:
 - a. SpecChem, LLC; Bio Strip WB (water-based): www.specchemllc.com/#sle.
 - b. W. R. Meadows, Inc; Duogard: www.wrmeadows.com/#sle.
 - c. Substitutions: See Section 01 60 00 - Product Requirements. Approved prior to bid. Submittal shall include recommend curing agent of Section 03 3000 for alternate system
- C. Dowel Sleeves: Plastic sleeve and nailable plastic base for smooth, round, steel load-transfer dowels.
- D. Waterstops: Preformed mineral colloid strips, 3/8 inch thick, moisture expanding.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 EARTH FORMS

- A. Hand trim sides and bottom of earth forms. Remove loose soil prior to placing concrete.

3.03 ERECTION - FORMWORK

- A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.
- B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.

3.04 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to be embedded in passing through concrete work.
- B. Locate and set in place items that will be cast directly into concrete.
- C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other work.
- D. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- E. Install waterstops in accordance with manufacturer's instructions, so they are continuous without displacing reinforcement.
- F. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.
- G. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.

3.06 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
- B. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and to verify that supports, fastenings, wedges, ties, and items are secure.

3.07 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

END OF SECTION

**SECTION 03 2000
CONCRETE REINFORCING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reinforcing steel for cast-in-place concrete.
- B. Supports and accessories for steel reinforcement.

1.02 RELATED REQUIREMENTS

- A. Section 03 1000 - Concrete Forming and Accessories.
- B. Section 04 2000 - Unit Masonry: Reinforcement for masonry.

1.03 REFERENCE STANDARDS

- A. ACI SP-66 - ACI Detailing Manual; American Concrete Institute International; 2004.
- B. ASTM D3963/D3963M - Standard Specification for Fabrication and Jobsite Handling of Epoxy Coated Reinforcing Steel Bars; 2001 (Reapproved 2007).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.
 - 1. Prepare shop drawings under seal of a Professional Structural Engineer experienced in design of work of this type and licensed in Oklahoma City, Oklahoma.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with structural drawings.

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: as indicated in details and notes on structural drawings.
- B. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch (1.29 mm).
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement. Use of concrete brickette supports only as allowed in structural notes on structural drawings.

2.02 FABRICATION

- A. Welding of reinforcement is not permitted unless specifically noted as allowed.
- B. Fabricate and handle epoxy-coated reinforcing in accordance with ASTM D3963/D3963M.
- C. Locate reinforcing splices not indicated on drawings at point of minimum stress.

PART 3 EXECUTION

3.01 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- B. Do not displace or damage vapor barrier.
- C. Accommodate placement of formed openings.
- D. Maintain concrete cover around reinforcing as follows:
 - 1. As indicated in structural notes.

3.02 FIELD QUALITY CONTROL

- A. An independent testing agency, as specified in Section 01 4000, will inspect installed reinforcement for conformance to contract documents before concrete placement.

END OF SECTION

SECTION 03 3000

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Floors and slabs on grade.
- B. Concrete foundations.
- C. Miscellaneous concrete elements, including equipment pads and other elements
- D. Concrete curing.

1.02 RELATED REQUIREMENTS

- A. Section 01 4000 - Quality Requirements and testing procedures.
- B. Section 03 1000 - Concrete Forming and Accessories: Forms and accessories for formwork.
- C. Section 03 2000 - Concrete Reinforcing.
- D. Section 07 9200 - Joint Sealers: Sealants for saw cut joints and isolation joints in slabs.

1.03 REFERENCE STANDARDS

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2002).
- B. ACI 211.2 - Standard Practice for Selecting Proportions for Structural Lightweight Concrete; American Concrete Institute International; 1998 (Reapproved 2004).
- C. ACI 301 - Specifications for Structural Concrete for Buildings; American Concrete Institute International; 2010.
- D. ACI 302.1R - Guide for Concrete Floor and Slab Construction; American Concrete Institute International; 2004 (Errata 2007).
- E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.
- F. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 2010.
- G. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 2010.
- H. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001 (Reapproved 2008).
- I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2008.
- J. ASTM C33 - Standard Specification for Concrete Aggregates; 2011.
- K. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2010.
- L. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2011.
- M. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2010a.

- N. ASTM C150 - Standard Specification for Portland Cement; 2011.
- O. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete; 2007.
- P. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2010b.
- Q. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a.
- R. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete; 2009.
- S. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2008a.
- T. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2010a.
- U. COE CRD-C 48 - Method of Test for Water Permeability of Concrete; 1992.
- V. NSF 61 - Drinking Water System Components - Health Effects; 2009.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
- C. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and 318.
- B. Acquire cement from same source and aggregate from same source for entire project.
- C. Follow recommendations of ACI 305R when concreting during hot weather.
- D. Follow recommendations of ACI 306R when concreting during cold weather.

1.07 WARRANTY

- A. In addition to normal warranty, provide 5 year warranty on floor sealers against dusting and chalking.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Comply with requirements of Section 03 1000.

2.02 REINFORCEMENT

- A. Comply with requirements of Section 03 2000 and notes on structural drawings.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150, Normal or Type II - Moderate Portland type.
 - 1. Acquire all cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C 33.
 - 1. Acquire all aggregates for entire project from same source.

- C. Lightweight Aggregate: ASTM C 330.
- D. Fly Ash: ASTM C618, Class C or F.
 - 1. Fly Ash permitted as identified on structural drawings and notes.
 - 2. Class C shall only be used if tests on aggregate show that the aggregate has no ASR reactivity.
- E. Calcined Pozzolan: ASTM C618, Class N.
- F. Silica Fume: ASTM C1240, proportioned in accordance with ACI 211.1.
- G. Water: Clean and not detrimental to concrete.
- H. Fiber Reinforcement when indicated: Alkali-resistant glass fiber, 1/4 inch length.

2.04 CHEMICAL ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Air Entrainment Admixture: ASTM C 260, percent as indicated in "Concrete Notes" on structural drawings.
- C. Chemical Admixtures: ASTM C 494/C 494M, Type A - Water Reducing, Type B - Retarding, Type C - Accelerating, and Type G - Water Reducing, High Range and Retarding.
 - 1. Use only as approved by Structural or Civil Engineer for mix design.
 - a. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

2.05 ACCESSORY MATERIALS

- A. Under-slab vapor barrier: refer Section 07 2600.
- B. Bonding and joint treatments: Refer Section 03 1000 and notes on drawings.
- C. Anchor Bolts: as indicated in structural notes.
- D. Non-shrink grout: as specified in Section 03 1000.
- E. Moisture-Retaining Cover: ASTM C 171; white burlap-polyethylene sheet.
- F. Liquid Concrete Floor Hardener / Densifier: Liqui-Hard Ultra, manufactured by W.R. Meadows or equivalent.
 - 1. Curing compounds, hardeners and sealers shall be manufactured by the same manufacturer to preserve compatibility.

2.06 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with standard identified in structural concrete notes.
- B. Proportioning Structural Lightweight Concrete: Comply with ACI 211.2 recommendations.
- C. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to TAP Architecture for preparing and reporting proposed mix designs.
- D. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.

- E. Fiber Reinforcement: Where required, add to mix at rate of 1.5 pounds per cubic yard (0.89 kg per cubic meter), or as recommended by manufacturer for specific project conditions.
- F. Normal Weight Concrete:
 - 1. Compressive strength as indicated in structural notes and scheduled at end of section when tested in accordance with ASTM C39 / C39M at 28 days.
 - 2. Fly Ash Content: Maximum 20 percent of cementitious materials by weight.
 - a. Use only as allowed by civil and structural notes.
 - 3. Calcined Pozzolan Content: Maximum 20 percent of cementitious materials by weight.
 - 4. Silica Fume Content: Maximum 15 percent of cementitious materials by weight.
 - 5. Water-Cement Ratio: Maximum 45 percent by weight.
 - 6. Total Air Content: 4.5 to 5.5 percent, determined in accordance with ASTM C173/C173M. All exterior concrete shall be air-entrained.
 - 7. Maximum Slump: 4 inches (100 mm) unless otherwise noted in structural notes.
 - 8. Maximum Aggregate Size: 3/4 inch (19 mm).

2.07 MIXING

- A. Transit Mixers: Comply with ASTM C94/C94M.

2.08 PERIMETER INSULATION

- A. Refer to Section 07 2100 for perimeter insulation.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Formwork: comply with Section 03 1000.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with standard referenced in Concrete Notes on structural drawings.
- B. Notify TAP Architecture not less than 24 hours prior to commencement of placement operations.
- C. Ensure reinforcement, inserts, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.

3.04 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
 - 1. Exposed Concrete Floors: 1/4 inch (6 mm) in 10 ft (3 m).
 - 2. Under Resilient Flooring: 1/4 inch (6 mm) in 10 ft (3 m).
 - 3. Under Carpeting: 1/4 inch (6 mm) in 10 ft (3 m).
- B. Correct the slab surface if tolerances are less than specified.
- C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.05 CONCRETE FINISHING

- A. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:

1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 301.1R; thin floor coverings include carpeting, resilient flooring, and thin set ceramic tile.
 2. Other Surfaces to Be Left Exposed: "Steel trowel" as described in ACI 302.1R, minimizing burnish marks and other appearance defects.
 3. After curing and where scheduled to remain exposed and sealed concrete, apply chemical hardener per manufacturer's directions.
- B. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal. Depression wells formed immediately around drains are not acceptable. Floors shall be maintained at accessible slope.

3.06 CURING AND PROTECTION

- A. Follow manufacturer's written instructions for application of curing and hardening compounds. Manufacturer's written instructions for application will supersede conflicting information provided by specification or detail.
- B. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
1. Normal concrete: Not less than 7 days.
 2. High early strength concrete: Not less than 4 days.
- D. Surfaces Not in Contact with Forms:
1. Slabs and Floors To Receive Adhesive-Applied Flooring: Curing compounds and other surface coatings are usually considered unacceptable by flooring and adhesive manufacturers. If such materials must be used, either obtain the approval of the flooring and adhesive manufacturers prior to use or remove the surface coating after curing to flooring manufacturer's satisfaction.
 2. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by saturated burlap.
 - a. Saturated Burlap: Saturate burlap-polyethylene and place burlap-side down over floor slab areas, lapping ends and sides; maintain in place.
 3. Final Curing: Begin after initial curing but before surface is dry.
 - a. Interior slabs to be left exposed shall utilize moist curing operations for entire curing period.
 - b. Curing Compound: Where allowed, apply in two coats at right angles, using application rate recommended by manufacturer.

3.07 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01400. First testing shall be paid by the Owner. Re-testing shall be paid by the contractor.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to testing firm for review prior to commencement of concrete operations.
- D. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.
- E. Compressive Strength Tests: ASTM C39/C39M. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cu yd (76 cu m) or less of each class of concrete placed.

- F. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

3.08 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to TAP Architecture and Contractor within 24 hours of test.
- B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances, strengths, containing excessive cracking as judged by architect, or not meeting other specified requirements.
- C. Repair or replacement of defective concrete will be determined by the TAP Architecture. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of TAP Architecture for each individual area.

3.09 PROTECTION

3.10 SCHEDULE - CONCRETE TYPES AND FINISHES

- A. Foundations and Piers: 3,000 psi 28 day concrete.
- B. Slabs on Grade: 3,500 psi 28 day concrete.
- C. Exterior flatwork: 3,500 psi 28 concrete, air entrained, broom finished, colored where indicated.

END OF SECTION

**SECTION 03 3511
CONCRETE FLOOR FINISHES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface treatments for concrete floors and slabs.
- B. Liquid densifiers and hardeners.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Finishing of concrete surface to tolerance; floating, troweling, and similar operations; curing.
- B. Section 03 3000 - Cast-in-Place Concrete: Curing compounds that also function as sealers.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with concrete floor placement and concrete floor curing.

1.04 PERFORMANCE REQUIREMENTS FOR LEED

- A. VOC Emissions Evaluation:
 - 1. Products must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.1-2010 or CDPH Standard Method v1.2-2017, using the applicable exposure scenario. The Claims of compliance must also state the range of total VOCs after 14 days, measured as specified in CDPH Standard Method V1.1 or CDPH Standard Method v1.2-2017.
- B. VOC content requirements for wet-applied products:
 - 1. For liquid floor treatments and curing and sealing compounds, in addition to meeting general requirements for VOC emissions (above), on-site wet-applied products must meet the applicable VOC limits for Paints and Coatings Applications, as per California Air Resource Board (CARB) 2007 Suggested Control Measure (SCM) for Architectural Coatings or South Coast Air Quality Management District (SCAQMD) Rule 1113, effective February 5, 2016. If a product cannot be reasonably tested as specified above, testing of VOC content must comply with ASTM D2369-10; ISO 11890, Part 1; ASTM D6886-03; or ISO 11890-2. Methylene chloride and perchloroethylene may not be intentionally added in paints and coatings.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Warranty Documentation: Manufacturer warranty; ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 SUBMITTALS DOCUMENTATION FOR LEED

- A. Complete provided Product Data Reporting Form in Specifications Section 01 8113 and provide the following:
- B. VOC Emissions Evaluations:
 - 1. Provide documentation that product complies with one of the following:
 - a. SCS Indoor Advantage Gold, floorScore, MAS Certificated Green, UL Greenguard Gold or CRI Green Label Plus. The third-party certification must state the exposure scenario used to determine compliance. Claims of compliance for wet-applied products must state the amount applied in mass per surface area. The Claims for compliance must also state the range of total VOCs after 14 days, measured as specified in CDPH Standard Method v1.1-2010 or DCPH Standard Method v1.2-2017.
- C. VOC Content requirements for wet-applied products:
 - 1. Provide MSDS or manufacturers cutsheets showing VOC requirements testing and compliant according to SCAQMD Rule 1168, October 6, 2017, or Canadian VOC Concentration Limits for Architectural Coatings (SOR)/2009-264) or the CARB 2007 SCM

for Architectural Coatings, SCAQMD Rule 1113, February 5, 2016, or European Deopaint Directive (2004/42/EC). If a product cannot be reasonably tested as specified above, testing of VOC content must comply with ASTM D239-10; ISO 11890, Part 1; ASTM D6886-03; or ISO 11890-2. Methylene chloride and perchloroethylene may not be intentionally added in paints, coating, adhesives, or sealants.

1.07 QUALITY ASSURANCE

- A. For slabs indicated to receive concrete polishing system, do not proceed with concrete polishing unless manufacturer's representative and specialized equipment is present for every day of placement.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's sealed packaging, including application instructions.

1.09 FIELD CONDITIONS

- A. Maintain light level equivalent to a minimum 200 W light source at 8 feet (2.5 m) above the floor surface over each 20 foot (6 m) square area of floor being finished.
- B. Do not finish floors until interior heating system is operational.
- C. Maintain ambient temperature of 50 degrees F (10 degrees C) minimum.

1.10 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Correct defective work within a two-year period commencing on the Date of Substantial Completion.
- C. Finish Warranty: Provide five-year manufacturer warranty against excessive degradation of finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

PART 2 PRODUCTS

2.01 CONCRETE FLOOR FINISH APPLICATIONS

- A. Unless otherwise indicated, all concrete floors are to be finished using liquid densifier/hardener.

2.02 DENSIFIERS AND HARDENERS

- A. Liquid Densifier and Hardener: Penetrating chemical compound that reacts with concrete, filling the pores, hardening, and dustproofing.
 - 1. Composition: Lithium silicate.
 - 2. Products:
 - a. Euclid Chemical Company; ULTRASIL LI+: www.euclidchemical.com/#sle.
 - b. Green Umbrella Architectural Concrete Systems; DryShield: www.greenumbrellasystems.com/#sle.
 - c. Master Builders Solutions: www.master-builders-solutions.com/en-us/#sle.
 - d. W. R. Meadows, Inc; Liqui-Hard Ultra: www.wrmeadows.com/#sle.
 - e. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that floor surfaces are acceptable to receive the work of this section.
- B. Verify that flaws in concrete have been patched and joints filled with methods and materials suitable for further finishes.

3.02 GENERAL

- A. Apply materials in accordance with manufacturer's instructions.

END OF SECTION

SECTION 04 2000
UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete Block.
- B. Mortar and Grout.
- C. Reinforcement and Anchorage.
- D. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 05 5000 - Metal Fabrications: Loose steel lintels.
- C. Section 07 9200 - Joint Sealers: Backing rod and sealant at control and expansion joints. Sealant at wall penetrations where not fire rated wall.
- D. Division 8 - Openings Sections: anchorage of frames in masonry; special masonry preparation requirements.
- E. Section 09 9000 Painting and Coating: final finish on exposed CMU scheduled to be finished.

1.03 REFERENCE STANDARDS

- A. ACI 530/530.1/ERTA - Building Code Requirements and Specification for Masonry Structures and Related Commentaries; 2011.
- B. ACI 530.1/ASCE 6/TMS 602 - Specification For Masonry Structures; American Concrete Institute International ; 2008.
- C. ASTM A82/A82M - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement ; 2007.
- D. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- E. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2014.
- F. ASTM C150/C150M - Standard Specification for Portland Cement; 2015.
- G. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2006 (Reapproved 2011).
- H. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2014a.
- I. ASTM C387/C387M - Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar; 2011b.
- J. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2011.
- K. ASTM C476 - Standard Specification for Grout for Masonry; 2010.
- L. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2012.
- M. UL (FRD) - Fire Resistance Directory; current edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Product Data: Provide data for fabricated wire reinforcement and masonry accessories.
- C. Samples: Submit two samples of CMU units to illustrate extremes of texture to be expected in completed assemblies. Coordinate with product section submittals.
 - 1. Coordinate with Section 09 9000 to include final finish steps on 1/2 of each block to illustrate extremes of final finish to be expected.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Comply with provisions of ACI 530/530.1/ERTA, except where exceeded by requirements of the contract documents.

1.06 MOCK-UP

- A. Construct a masonry wall section 4' long as a mock-up to include all aspects of wall such as flush mortar joints a base location, reinforcing grouted in steps, an opening and header and jamb reinforcements, anchorage to structure at top of wall, sealant at top of wall. Coordinate with mockup required for products.
- B. Locate where directed.
- C. Approved mock-up may remain as part of the Work.

1.07 PRE-INSTALLATION MEETING

- A. Convene one week before starting work of this section.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

1.09 ENVIRONMENTAL REQUIREMENTS

- A. Maintain materials and surrounding air temperature to minimum 40 degrees F (5 degrees C) prior to, during, and 48 hours after completion of masonry work.
- B. Maintain materials and surrounding air temperature to maximum 90 degrees F (32 degrees C) prior to, during, and 48 hours after completion of masonry work.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows: Basis of design – Smooth Face by Echelon – Smooth face structural CMU
 1. Size: Standard units with nominal face dimensions of 16 by 8 inches (400 by 200 mm) as detailed for location, nominal depth of 8 inches (200 mm).
 2. Size: Standard units with nominal face dimensions of 16 by 4 inches (400 by 200 mm) as detailed for location, nominal depth of 8 inches (200 mm).
 2. Special Shapes: Provide non-standard blocks configured for corners, control joint edges, and other detailed conditions. Bull-nosed corner, jamb and end units.
 3. Load-Bearing and Non-Load Bearing Units: ASTM C 90, normal weight unless otherwise indicated.
 4. Finish: Pre-finished, integrally colored concrete block meeting the requirements of ASTM C90. manufactured using a combination of colored, tightly mixed aggregate to create a smooth ground face finish.
 5. Color: Architect to select from manufacturers standard color range. Integrally Colored.
 6. Water Repellent Admixtures: Liquid polymeric, admixture that does not reduce flexural bond strength.
 - a. Basis of Design Product: RainBloc Water Integral Repellent Masonry Unit admixture, manufactured by ACM Chemistries, Inc. – or as recommended by CMU manufacturer.

2.02 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I ; color as required to produce approved color sample.
 1. Hydrated Lime: ASTM C207, Type S.
 2. Grout Aggregate: ASTM C404.
- B. Water: Clean and potable.
- C. Packaged Dry Material for Mortar for Unit Masonry: Premixed Portland cement, hydrated lime, and sand; complying with ASTM C387/C387M and capable of producing mortar of the specified

strength in accordance with ASTM C270 with the addition of water only at the site for consistency.

1. Type: Type N typical.
2. Color: Standard gray.
3. Manufacturers:
 - a. SpecMix: Portland Lime & Sand Masonry Mortar (M,S,N): www.specmix.com.
 - b. Amerimix, an Oldcastle brand ; AMX 400: www.amerimix.com.
 - c. Substitutions: See Section 01 6000 - Product Requirements.
- D. Packaged Dry Material for Grout for Masonry: Premixed cementitious materials and dried aggregates; capable of producing grout of the specified strength in accordance with ASTM C476 with the addition of water only.
 1. Type: Fine.
 2. Manufacturers:
 - a. SpecMix; Core Fill Masonry Grout (Fine & Course): www.specmix.com.
 - b. Amerimix, an Oldcastle brand ; AMX 600: www.amerimix.com.
 - c. Substitutions: See Section 01 6000 - Product Requirements.
- D. Mortar must include manufacturer approved compatible integral water repellent additive added to each batch in the dosage rates for mortar type specified.

2.03 REINFORCEMENT AND ANCHORAGE

- A. Manufacturers:
 1. Heckmann Building Products, Inc: www.heckmannbuildingprods.com.
 2. Hohmann & Barnard, Inc (including Dur-O-Wal brand): www.h-b.com.
 3. WIRE-BOND: www.wirebond.com.
 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Reinforcing Steel: ASTM A 615/A 615M Grade 40 (280) deformed billet bars; uncoated unless otherwise noted in Structural drawings..
- C. Strap anchors:
 1. Expansion joints: Slip-Set Stabilizer by H&B or equivalent.
 - a. Hot-dip galvanized strap designed to allow expansion and control joints to perform while restraining lateral movement.
 - b. Field bend as required for condition encountered.
 2. Rigid intersections: MWT Mesh Wall Tie by H&B or equivalent. Standard 1/2" square x 16 ga. thick mesh tie sized to application need allowing not less than 1" face mortar coverage. Hot-dip galvanized.
 - a. Not required where intersecting block is interlaced in coursing.

2.04 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
 1. Manufacturers:
 - a. Heckmann Building Products, Inc : www.heckmannbuildingprods.com.
 - b. Hohmann & Barnard, Inc : www.h-b.com/sle.
 - c. WIRE-BOND: www.wirebond.com.
 - d. Substitutions: See Section 01 6000 - Product Requirements.
- B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self-expanding; 1/2" wide x by maximum lengths available.
 1. Manufacturers:
 - a. Dur-O-Wal : www.dur-o-wal.com.
 - b. Hohmann & Barnard, Inc : www.h-b.com/sle.
 - c. WIRE-BOND: www.wirebond.com.
 - d. Substitutions: See Section 01 6000 - Product Requirements.

- C. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.
- C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 COLD AND HOT WEATHER REQUIREMENTS

- A. Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

3.04 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Expansion and control joints: as indicated on drawings. Drawings show general location.
- D. Concrete Masonry Units:
 - 1. Bond: Running unless otherwise indicated in detail. No piece less than 4" long.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches (200 mm).
 - 3. Mortar Joints Interior: Concave.
 - a. Mortar Joints behind base locations to be struck flush up to height of base.

3.05 PLACING AND BONDING

- A. Lay hollow masonry units with face shell bedding on head and bed joints.
- B. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- C. Remove excess mortar and mortar smears as work progresses.
- D. Interlock intersections and external corners .
- E. No toothing of progressive masonry work permitted. Progressive work shall blend and not show a patch or toothing characteristics.
- F. Securely cover installed work at end of each workday to prevent moisture accumulation in cavity.
- G. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- H. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
- I. Cut mortar joints flush where wall tile is scheduled or resilient base is scheduled.
- J. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

3.06 REINFORCEMENT AND ANCHORAGE - GENERAL

- A. Refer requirements under Masonry notes on structural drawings.
- B. Lap joint reinforcement ends minimum 6 inches (150 mm).
- C. Reinforce stack bonded unit joint corners and intersections with strap anchors 16 inches (400 mm) on center.
- D. Reinforce block cells per structural drawing notes.

- E. Top of wall anchorage: where wall is not intended to be bearing, but attaches to structural framing member for stability, utilize appropriate PTA series top of wall anchor by H&B or equivalent for condition encountered unless an alternate method is indicated in the structural notes.

3.07 LINTELS

- A. Install reinforced unit masonry lintels over openings where steel lintels are not scheduled. Refer Masonry Notes on Structural Drawings for requirements.
 - 1. Do not splice reinforcing bars.
 - 2. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch (13 mm) of dimensioned position.
 - 3. Place and consolidate grout fill without displacing reinforcing.
 - 4. Allow masonry lintels to attain specified strength before removing temporary supports.

3.08 GROUTED COMPONENTS

- A. Reinforce bond beams per structural notes.
- B. Reinforce block cells per structural notes.
- C. Lap splices minimum 24 bar diameters unless otherwise noted.
- D. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch (13 mm) of dimensioned position.
- E. Place and consolidate grout fill without displacing reinforcing.
- F. At bearing locations, fill masonry cores with grout for a minimum 12 inches (300 mm) either side of opening.
- G. Grout using low-lift methods, grouting cores as vertical work progresses. Stop grout lifts such that next lift interlocks to cells below.

3.09 CONTROL AND EXPANSION JOINTS

- A. Do not continue reinforcing through control and expansion joints.
- B. Utilize joint stabilizing strap anchor allowing for expansion but designed to limit lateral displacement at intersections of perpendicular walls not intended to be laid jointed.
- C. Vertically reinforce cells each side of joint as indicated.
- D. Install preformed control joint device in continuous lengths in straight runs. Seal joints in accordance with manufacturer's instructions.

3.10 BUILT-IN WORK

- A. As work progresses, install built-in metal door frames and other items to be built into the work and furnished under other sections.
- B. Install built-in items plumb, level, and true to line.
- C. Bed anchors of metal door and glazed frames in adjacent mortar joints. Fill frame voids solid with grout. Coordinate with frame installer to back-paint frame cavity with mastic paint prior to placing grout.
 - 1. Fill adjacent masonry cores with grout minimum 12 inches (300 mm) from framed openings.
- D. Do not build into masonry construction organic materials that are subject to deterioration.

3.11 TOLERANCES

- A. Maximum Variation From Unit to Adjacent Unit: 1/16 inch (1.6 mm).
- B. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft (6 mm/3 m) and 1/2 inch in 20 ft (13 mm/6 m) or more.
- C. Maximum Variation from Level Coursing: 1/8 inch in 3 ft (3 mm/m) and 1/4 inch in 10 ft (6 mm/3 m); 1/2 inch in 30 ft (13 mm/9 m).

- D. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch (minus 6.4 mm, plus 9.5 mm).
- E. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch (6 mm).

3.12 CUTTING AND FITTING

- A. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.13 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.
- D. Use non-metallic tools in cleaning operations.

3.14 PROTECTION

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION

SECTION 05 5000
METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items, including:
 - 2. Miscellaneous steel items not specified elsewhere.
 - 3. Miscellaneous fastener requirements.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.
- B. Section 04 2000 - Unit Masonry: Placement of metal fabrications in masonry.
- C. Section 09 9000 – Painting and Coating: Paint finish.

1.03 REFERENCE STANDARDS

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2012.
- B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- C. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2012.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2015.
- E. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2013.
- F. ASTM B211M - Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold-Finished Bar, Rod, and Wire (Metric); 2012.
- G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- H. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- I. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015.
- J. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002 (Ed. 2004).
- K. SSPC-SP 2 - Hand Tool Cleaning; 1982 (Ed. 2004).

1.04 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Shop Drawings: Provide shop drawing of components, measured to fit field conditions. Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories. Include elevations, section, and details. Indicate coordination needed with other trades.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
- C. Welders' Certificates: Submit certification for welders employed on the project, verifying AWS qualification within the previous 12 months.

1.05 QUALITY ASSURANCE

- A. Design load bearing elements under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in Oklahoma.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Unless otherwise noted, provide elements with the following characteristics primed or galvanized as indicated:
- B. Steel Sections: ASTM A36/A36M.
- C. Plates: ASTM A283/A283M.
- D. Pipe: ASTM A53/A53M, Grade B Schedule 40, .
- E. Sheets for splashes: Type 304, thickness and edge condition indicated, #6 finish.
- F. Fasteners: as called for in details. Expansion bolts to be self-shielded type of size called out or appropriate to retain connection under anticipated loads with a safety factor of four. Galvanized where subject to moisture degradation. Stainless steel where holding stainless steel metals.
- G. Bolts, nuts, and washers: ASTM A325N.
- H. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- I. Shop and Touch-Up Primer: Standard red-oxide, complying with VOC limitations of authorities having jurisdiction.
- J. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.
 - 1. Comply with mockup and paint adhesion testing requirement for painted galvanized surfaces. Refer Section 09 90 00 requirements for special preparation procedures.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Miscellaneous angles, bars, and plates: size indicated, galvanized where indicated. Otherwise standard primed finish for final field finish by Section 09 9000.

2.05 FINISHES - STEEL

- A. Prime paint all steel items except where indicated to be galvanized or stainless steel.
 - 1. Exceptions: Do not prime surfaces where field welding is required.
- B. Prepare surfaces to be primed in accordance with SSPC-SP2.
- C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- D. Prime Painting: One coat.
- E. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

2.06 FINISHES - ALUMINUM

- A. Exterior Aluminum Surfaces: Class I natural anodized.
- B. Interior Aluminum Surfaces: Class I natural anodized.
- C. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils (0.018 mm) thick.

2.07 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch (1.5 mm).
- C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.5 mm).
- D. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).
- E. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required and touch up primer after welding.

3.03 INSTALLATION

- A. Install items plumb and level unless another orientation is specifically indicated, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components as indicated on drawings.
- D. Perform field welding in accordance with AWS D1.1/D1.1M.
- E. Obtain approval prior to site cutting or making adjustments not scheduled.
- F. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete or stainless steel.
- G. Touch up galvanized elements.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).
- C. Maximum Out-of-Position: 1/4 inch (6 mm).

END OF SECTION

**SECTION 06 1000
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roofing nailers and blocking.
- B. Preservative treated wood materials.
- C. Miscellaneous wood blocking and sheathing.
- E. Concealed wood blocking, nailers, and supports for accessories and other locations in metal stud walls for secure attachment of bracing or accessory.
- F. Miscellaneous wood shims.

1.02 RELATED REQUIREMENTS

- A. Section 06 1753 – Shop Fabricated Wood Trusses.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- B. ASTM C 473 - Standard Test Methods for Physical Testing of Gypsum Panel Products; 2015.
- C. ASTM D 1037 - Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials; 2012
- D. ASTM D 2394 - Standard Test Methods for Simulated Service Testing of Wood and Wood-Base Finish Flooring; 2011.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- F. AWPA C2 - Lumber, Timber, Bridge Ties and Mine Ties -- Preservative Treatment by Pressure Processes; American Wood Protection Association ; 2003.
- G. AWPA U1 - Use Category System: User Specification for Treated Wood; 2012.
- H. PS 1 - Structural Plywood; 2009.
- I. PS 20 - American Softwood Lumber Standard; 2010.
- J. SPIB (GR) - Grading Rules; 2014.

1.04 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Product Data: Provide technical data on wood preservative materials and application instructions.

1.05 QUALITY ASSURANCE

- A. Lumber: Comply with PS 20 and approved grading rules and inspection agencies.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service

for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

- B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

- A. Communications and Electrical Room Mounting Boards: PS 1 A-D plywood; 3/4 inch (19 mm) thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
- B. Roof Deck: 5/8" structural grade plywood. Refer structural and roofing manufacturers recommendations.

2.04 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity wood and exterior wall locations, unfinished steel elsewhere.
 - 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
 - 3. Simpson Clips at joints between trusses. Refer structural.

2.05 FACTORY WOOD TREATMENT

- A. General: Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 - 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
- B. Fire Retardant Treatment: AWPA Treatment C20, Interior Type A Low Temperature (low hygroscopic), chemical treatment pressure impregnated; capable of providing a maximum flame spread of 25.
- C. Fire Retardant Treatment: AWPA Treatment C20, Exterior Type, chemical treatment pressure impregnated; capable of providing a maximum flame spread of 25.
- D. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative .
 - 1. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - a. Treat lumber exposed to weather.
 - 2. Preservative Pressure Treatment of Plywood Above Grade: AWPA U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative .
 - a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.

- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

3.03 ROOF-RELATED CARPENTRY

- A. Provide blocking members and shapes as indicated.

3.04 INSTALLATION OF CONSTRUCTION PANELS

- A. Secure with long dimension perpendicular to height of wall. Where installed on wall studs or furring, install with ends over firm bearing and staggered, using zinc plated screws.
 - 1. Where installed over tilt-up concrete walls, board may be install in most economical direction.
- B. Communications and Electrical Room Mounting Boards: Secure with screws to studs or furring with edges over firm bearing; space fasteners at maximum 24 inches (610 mm) on center on all edges and into studs in field of board.
 - 1. Install adjacent boards without gaps.

3.05 CLEANING

- A. Waste Disposal:
 - 1. Comply with applicable regulations.
 - 2. Do not burn scrap on project site.
 - 3. Do not burn scraps that have been pressure treated.
 - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Clean up remnants and restrict access to treated products by unauthorized persons.

END OF SECTION

**SECTION 061753
SHOP-FABRICATED WOOD TRUSSES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop-fabricated wood trusses.
- B. Truss bridging.
- C. Preservative treatment of wood.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Installation requirements for miscellaneous framing.

1.03 REFERENCE STANDARDS

- A. ANSI/TPI 1 - National Design Standard for Metal-Plate-Connected Wood Truss Construction 2014.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- C. AWPA U1 - Use Category System: User Specification for Treated Wood 2022.
- D. SBCA (BCSI) - Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses 2018 (Updated 2020).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on plate connectors, bearing plates, and metal bracing components.
- C. Shop Drawings: Show truss configurations, sizes, spacing, size and type of plate connectors, cambers, framed openings, bearing and anchor details, and bridging and bracing.
 - 1. Include identification of engineering software used for design.
 - 2. Provide shop drawings stamped or sealed by design engineer.
- D. Designer's Qualification Statement.
- E. Fabricator's Qualification Statement.

1.05 QUALITY ASSURANCE

- A. Designer Qualifications: Perform design by or under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State in which the Project is located.
- B. Fabricator Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Handle trusses in accordance with SBCA (BCSI).
- B. Store trusses in vertical position resting on bearing ends.

PART 2 PRODUCTS

2.01 TRUSSES

- A. Wood Trusses: Design and fabricate trusses in accordance with ANSI/TPI 1 and to achieve specified design requirements indicated. Refer Structural.

2.02 MATERIALS

- A. Lumber:
 - 1. Moisture Content: Between 7 and 9 percent.

2. Lumber fabricated from old growth timber is not permitted.
- B. Steel Connectors: Hot-dipped galvanized steel sheet, ASTM A653/A653M Structural Steel (SS) Grade 33/230, with G90/Z275 coating; die stamped with integral teeth; thickness as indicated.
- C. Truss Bridging: Type, size and spacing recommended by truss manufacturer.

2.03 ACCESSORIES

- A. Wood Blocking, Bridging, Plates, and Miscellaneous Framing: As specified in Section 061000.
- B. Fasteners: Hot-dip galvanized steel, type to suit application.
- C. Bearing Plates: Hot-dip galvanized steel.

2.04 WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
- B. Preservative Pressure Treatment of Lumber: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention (to 4.0 kg/cu m retention).
 1. Kiln dry after treatment to maximum moisture content of 19 percent.
 2. Marking: Mark each piece with stamp of an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that supports and openings are ready to receive trusses.

3.02 PREPARATION

- A. Coordinate placement of bearing items.

3.03 ERECTION

- A. Install trusses in accordance with manufacturer's instructions, SBCA (BCSI); maintain a copy of applicable documents on site until installation is complete.
- B. Set members level and plumb, in correct position.
- C. Do not field-cut or alter structural members without approval of Architect.
- D. Install permanent bridging and bracing.
- E. Coordinate placement of decking with work of this section.
- F. After erection, touch-up primed surfaces with primer consistent with shop coat.

3.04 TOLERANCES

- A. Framing Members: 1/2 inch (12 mm) maximum, from true position.

END OF SECTION

**SECTION 07 2100
THERMAL INSULATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Board insulation at perimeter foundation wall.
- B. Batt insulation for filling door shim spaces and crevices in exterior wall and roof.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Concrete and vapor barrier over perimeter foundation and under-slab board insulation.
- B. Section 06 1000 - Rough Carpentry: Installation requirements for board insulation over steep slope roof sheathing or roof structure.
- D. Section 31 3116 - Termite Control: treatment of underslab fill coordinated with perimeter insulation installation.

1.03 REFERENCE STANDARDS

- A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2015a.
- B. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.
- C. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2014.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- E. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.

1.04 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

1.05 FIELD CONDITIONS

- A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.01 FOAM BOARD INSULATION MATERIALS

- B. Perimeter under slab and foundation rigid insulation: Extruded Polystyrene Board Insulation: ASTM C578, Type X; Extruded polystyrene board with cut cell surfaces; with the following characteristics: Square Edge by Dow or equivalent.
 - 1. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
 - 2. Location: as indicated on drawings.
 - 3. Board Size: 24 x 96 inch (610 x 2440 mm) x thickness indicated.
 - 4. Board Edges: Square.
 - 5. Thermal Conductivity (k factor) at 25 degrees F (-3.9 degrees C): 0.18 (0.31).
 - 6. Compressive Resistance: 15 psi (104 kPa).
 - 7. Board Density: 1.3 lb/cu ft (21 kg/cu m).
 - 8. Water Absorption, Maximum: 0.3 percent, by volume.
- C. Manufacturers:
 - 1. Dow Chemical Co: www.dow.com. Product standard.
 - 2. Owens Corning Corp: www.owenscorning.com.
 - 3. Kingspan Insulation LLC; GreenGuard XPS TYPE IV 25 PSI: www.trustgreenguard.com.

4. Substitutions: See Section 01 6000 - Product Requirements. Approved prior to bid.

2.02 BATT INSULATION MATERIALS

- A. Batt Insulation (exterior envelope applications): ASTM C 665; preformed 24 inches (600 mm), or 16" (400 mm) glass fiber; friction fit, conforming to the following:
 1. Thermal Resistance: R of 19 at roof structure.
 2. Thickness: 6.0 inch (152 mm).
 3. Facing: Faced.
 4. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/450, when tested in accordance with ASTM E 84.
 5. Manufacturers:
 - a. CertainTeed Corporation: www.certainteed.com.
 - b. Johns Manville : www.jm.com.
 - c. Owens Corning Corp: www.owenscorning.com.
- C. Batt Insulation: at door and window perimeters for filling voids.
 1. Unfaced fiberglass or mineral wool batt pieces per the batt insulation type used on the project.

2.04 ACCESSORIES

- A. Rigid Insulation Tape: Dow Weathermate or equivalent designed to seal joints in insulated sheathings, 2 7/8", clear with oriented polypropylene UV-treated release film; acrylic adhesive compatible with insulation.
- B. Friction fit may be used where insulation is trapped tight by wall coverings on both sides and insulation fills cavity. Otherwise, use insulation fasteners to prevent potential sag or dislodging from installed position: Impaling clip of galvanized steel with washer retainer and clips, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.
- C. Adhesive: optional fastening method, type recommended by insulation manufacturer for application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation and adhesive or retention clips.
- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond or proper seating of clips.

3.02 BOARD INSTALLATION AT FOUNDATION PERIMETER

- A. Post-formed after pour: Adhere a 6 inch (150 mm) wide strip of polyethylene sheet over construction, control, and expansion joints with double beads of adhesive each side of joint.
 1. Tape seal joints.
 2. Extend sheet full height of joint.
- B. Apply adhesive to back of boards:
 1. Three continuous beads per board length in amount necessary to secure board in place allow backfilling without disturbing board.
- C. Install boards horizontally on foundation perimeter.
 1. Place boards to maximize adhesive contact.
 2. Butt edges and ends tightly to adjacent boards and to protrusions.
 3. Where chamfer of grade at slab edge occurs, neatly score board without separating to allow board to lie over chamfer. Butt under-floor units tight to foundation wall units.
- D. Extend boards over expansion joints, unbonded to foundation on one side of joint.
- E. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

- F. If foundations are earth formed, installation may be prior to pour to be trapped by pour if a tight jointed installation can be accomplished. Hand trimming of excavations to achieve this end is required. Two piece installation allowed for return under slab, butted tight to vertical or chamfer lay-over board.

3.07 BATT INSTALLATION

- A. Install insulation in accordance with manufacturer's instructions.
- B. Install without gaps or voids. Do not compress insulation more than necessary.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

3.08 PROTECTION

- A. Do not permit installed insulation to be damaged prior to its concealment.
- B. Do not install wall or ceiling insulations until project is dried in unless otherwise specifically noted.

END OF SECTION

**SECTION 07 4113
METAL ROOF PANELS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Architectural roofing system of preformed steel panels.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

- A. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2020.
- B. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).
- C. IAS AC472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2018.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
 - 3. Specimen warranty.
- C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.
- D. Selection Samples: For each roofing system specified, submit color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each roofing system specified, submit samples of minimum size 12 inches square, representing actual roofing metal, thickness, profile, color, and texture.
 - 1. Include typical panel joint in sample.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Test Reports: Indicate compliance of metal roofing system to specified requirements.
- I. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in City of Moore's name and are registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Finish Warranty: Provide manufacturer's special warranty covering failure of factory-applied exterior finish on metal roof panels and agreeing to repair or replace panels that show evidence of finish degradation, including significant fading, chalking, cracking, or peeling within specified warranty period of five years from Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Design basis:

1. Building roof: Berridge Cee-Lock System as manufactured by Berridge.
 - a. Nominal 16" wide Cee-Lock panel cross-section with striations in pan.
 - b. Nominal 1.5" tall standing seam.
 - c. Extruded Vinyl Weatherseal.
 - d. Pre-finished 24 ga. 40 K.S.I. steel.
 - e. Mechanically seamed 90 degree side lap.
 - f. U.L. 90 wind uplift rated.
 - g. Continuous lengths.
 2. Soffit Panels: Berridge Vee-Panel System as manufactured by Berridge.
 - a. Vented or non-vented as indicated.
 - b. 12-3/4" coverage with a panel depth of 3/8".
 - c. V-grooves spaced at 4 1/4" o.c..
 3. Colors as selected from standard line of fluoropolymer coatings produced with full strength Kynar 500®.
- B. Other Acceptable manufacturers: (must be able to match or reasonably closely match color and panel profile of existing in-place systems. Judge of reasonable closeness is the Architect. Therefore, submission prior to bid is recommended.
1. Architectural Building Components: www.archmetalroof.com.
 2. ATAS International, Inc: www.atas.com.
 3. Firestone Building Products LLC: www.firestonebpco.com.
 4. Metal-Span, a Division of NCI Group, Inc: www.metalspan.com.
 5. Petersen Aluminum Corporation: www.pac-clad.com.
- C. Substitutions: See Section 01 6000 - Product Requirements. Approved prior to bid. All manufacturers must have a panel in standard line or be able to fabricate a custom panel equivalent to design aesthetic of product specified to be considered acceptable for use on project.

2.02 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement. Use exposed fasteners only when necessary.

2.03 PERFORMANCE REQUIREMENTS

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
 3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.

2.04 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.05 FABRICATION

- A. Panels: Provide factory fabricated panels with applied finish and accessory items, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.

2.06 FINISHES

- A. Prefinished metal shall be Aluminum-Zinc Alloy Coated (AZ-55 Galvalume®) Steel Sheet, 24-Gauge or 22-Gauge, ASTM 792-08, Grade 40, yield strength 40 ksi min.
- B. Panels: Fabricate panels and accessory items at factory, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
 - 1. Miscellaneous trims may require field-break to suite field condition.
 - 2. Architect to select from manufacturer's standard color line.
- C. Joints: Factory-install captive gaskets, sealants, or separator strips at panel joints to provide weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.
 - 1. Trims: tight butt sealed joints.

2.07 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, fascia, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
- D. Underlayment: Synthetic non-asphaltic sheet, intended by manufacturer for mechanically fastened roofing underlayment without sealed seams. Verify compatibility with manufacturer.
 - 1. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
 - 2. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
 - 3. Fasteners: As specified by manufacturer and building code qualification report or approval.
 - 4. Manufacturers:
 - a. Owens Corning Titanium UDL 30 (Design Basis).
 - b. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify TAP Architecture of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.
- B. Remove protective film from surface of roof panels immediately prior to installation. Strip film carefully, to avoid damage to prefinished surfaces.
- C. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by roof panel manufacturer.
- D. Where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions.

Anchor all components of roofing system securely in place while allowing for thermal and structural movement.

1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.
- B. Accessories: Install all components required for a complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.
- C. Install ice and water shield at designated zones at eaves and rakes.
- D. Install roofing felt and building paper slip sheet on roof deck before installing preformed metal roof panels. Secure by methods acceptable to roof panel manufacturer, minimizing use of metal fasteners. Apply from eaves to ridge in shingle fashion, overlapping horizontal joints a minimum of 2 inches and side and end laps a minimum of 3 inches. Offset seams in building paper and seams in roofing felt.
- E. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.
- F. Soffit Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.

3.04 CLEANING

- A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.05 PROTECTION

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

END OF SECTION

SECTION 07 6200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including roof flashings, gutters, and downspouts.
- B. Sealants for joints within sheet metal fabrications.
- C. Reglets and accessories.
- D. Precast concrete splash pads.

1.02 RELATED REQUIREMENTS

- A. Section 03 1000 - Concrete Forming and Accessories: Placement of recessed reglets in formwork.
- B. Section 06 1000 - Rough Carpentry: Wood nailers.
- C. Section 07 2500 - Weather Barriers: specification for flexible flashings.
- D. Section 07 5200 - Modified Bituminous Membrane Roofing: Roofing system.
- E. Section 07 7200 - Roof Accessories: Roof Hatches.
- F. Section 07 9200 - Joint Sealers.

1.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; 2013.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- C. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process; 2016.
- D. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.
- F. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2009.
- G. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2012).
- H. CDA A4050 - Copper in Architecture - Handbook; current edition.
- I. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section.

1.05 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- C. Samples: Submit two samples 2" x 4" approximately in size illustrating metal finish colors specified for initial verification of selection.
- D. Confirmation sample: Provide 6" x 6" sample of final selection for verification.

1.06 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Prefinished metal: 24 ga Hot-dipped galvanized steel, grade C, 40 ksi, G-90 coating ASTM A653 & A924.
 - 1. Finish shall be Kynar 500 or Hylar 5000 Fluorocarbon coating applied on coil coating line with top side film thickness of 0.70 to 0.80 mil over 0.20 to 0.30 prime coat to provide a total dry film thickness of 1.0 plus or minus 0.10 mil.
 - 2. Reverse side shall be coated with a backer coating of 0.30 +/- 0.05 mil nominal dry film thickness.
 - 3. Finish shall conform to all tests for adhesion, flexibility, and longevity as specified by Kynar 500 or Hylar 5000 finish supplier.
 - 4. as selected from standard color line.
- B. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage (0.0239 inch) (0.61 mm) thick base metal.
- C. Material use as indicated in schedule at end of section.
- D. Pre-finished metal: roll-stock as supplied by Section 07 5200 Pre-manufactured metal flashing system manufacturer for color match and selection.

2.03 MANUFACTURED REGLETS

- A. Locations as indicated.
- B. Fry Reglet types W reglet. (www.fryreglet.com) or equal approved prior to bid. Other shapes as necessary.
 - 3. Provide pre-fabricated inside and outside corners where needed.

2.04 ACCESSORIES

- A. Fasteners: Compatible corrosion resistant fasteners of size and length required for secure attachment, electrolysis neutral. Seal water-tight where exposed using acceptable method. Indicate on shop drawings.
 - 1. Use concealed fasteners to the greatest extent possible unless specifically detailed that exposed fastener is acceptable.
 - 2. Stainless steel fasteners and clamp rings where indicated.
- B. Adhesive: Totally asbestos free, as recommended by flashing manufacturer
- C. Underlayment: ASTM D226/D226M, organic roofing felt, Type I ("No. 15").
- D. Primer: Zinc chromate type.
- E. Protective Backing Paint: Zinc molybdate alkyd.
- F. Sealant to be Concealed in Completed Work: Non-curing butyl sealant.
- G. Sealant to be Exposed in Completed Work: ASTM C920; elastomeric sealant, 100 percent silicone with minimum movement capability of plus/minus 25 percent and recommended by manufacturer for substrates to be sealed; clear.
- H. Sealant: Type Exterior Metal Lap Joint Sealant specified in Section 07 9005.
- I. Plastic Cement: ASTM D4586/D4586M, Type I.
- J. Solder: ASTM B32; Sn50 (50/50) type.

2.05 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.

- C. At exposed flashings, hem exposed edges on underside 1/2 inch (13 mm); miter and solder corners. use concealed cleats when possible for secure attachment.
- D. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams. Lapped sealed seams minimum 6".
- E. Fabricate corners from one piece with minimum 18 inch (450 mm) long legs; solder for rigidity.
- F. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.
- G. Where flashing may be termination of a run, form end dams as needed to direct any intruding moisture off flashing back to exterior.

2.06 GUTTER AND DOWNSPOUT FABRICATION

- A. Gutters: SMACNA (ASMM), Rectangular profile.
- B. Scuppers, downspouts and leader heads: Profile as indicated.
- C. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of that required under the OUBCC code modifications for the State of Oklahoma in accordance with SMACNA Architectural Sheet Metal Manual. Sizes indicated on drawings are minimum size acceptable.
- D. Accessories: Profiled to suit gutters and downspouts.
 - 1. Anchorage Devices: In accordance with SMACNA requirements.
 - 2. Gutter Supports: Straps.
 - 3. Downspout Supports: Brackets.
- E. Splash Pads: Precast concrete type, of nominal 12" x 30" x 3" size, nominal weight of 48 lbs, natural color, minimum 5000 psi (35 MPa) at 28 days, with minimum 5 percent air entrainment. Reinforced with grade 60 steel.
- F. Downspout Shoes: Material and finish matching downspout.
- G. Seal metal joints.

PART 3 EXECUTION

3.01 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil (0.4 mm).

3.02 INSTALLATION

- A. Where reglets are indicated, Insert flashings into reglets to form tight fit. Secure in place per manufacturer instructions. Seal flashings into reglets and reglet receivers to wall with sealant. Provide redundant sealant bead at wall.
- B. Secure flashings in place using concealed fasteners to extent possible.
- C. Apply plastic cement compound between metal flashings and felt flashings.
- D. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Seal metal joints watertight. Minimum lap on joints is 6".
- F. Secure gutters and downspouts in place using fasteners intervals to prevent permanent distortion from rain loads
- G. Set splash pads under downspouts.
- H. Install manufactured pre-formed systems in accordance with manufacturer's instructions if used.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for field inspection requirements.
- B. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

3.04 SCHEDULE

- A. Fascia and Cornices : 22 ga.
- B. Gutters and Downspouts: 22 ga.
- C. Scuppers: 20 ga.
- D. Wind-rated coping and edge metal systems: refer Section 07 5200.
- E. Counterflashings at Curb-Mounted Roof Items : 24 ga. galvanized steel.
- F. Rain hoods, collars, etc. 24 ga. galvanized minimum.
- G. Other components: 24 ga. minimum. Increase thickness if required to prevent oil can appearance.
- H. Roofing Penetration Flashings, for Pipes, Structural Steel, and Equipment Supports: as detailed. Refer Section 07 5200 for additional information.

END OF SECTION

**SECTION 07 9200
JOINT SEALERS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sealants and joint backing.

1.02 RELATED REQUIREMENTS

- C. Section 07 6200 - Sheet Metal Flashing and Trim: Requirements for sealants required in conjunction with elements identified in that section.

1.03 REFERENCE STANDARDS

- A. ASTM C834 - Standard Specification for Latex Sealants; 2014.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2013.
- E. ASTM D1667 - Standard Specification for Flexible Cellular Materials--Poly(Vinyl Chloride) Foam (Closed-Cell); 2005 (Reapproved 2011).

1.04 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Samples: Submit two samples, 1"x1" size illustrating sealant colors for selection.

1.05 MOCK-UP

- A. Provide mock-up of sealant joints in conjunction with window and wall under provisions of Section 01 4000. Mock-up may remain a part of the work.
- B. Construct mock-up with specified sealant types and with other components noted.
- C. Locate where approved.

1.06 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.07 COORDINATION

- A. Coordinate the work with all sections referencing this section.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Silicone Sealants:
 - 1. Bostik Inc : www.bostik-us.com.
 - 2. Momentive Performance Materials, Inc (formerly GE Silicones) : www.momentive.com.
 - 3. Dow Corning Corp : www.dowcorning.com.
 - 4. Pecora Corporation : www.pecora.com.
 - 5. BASF Construction Chemicals-Building Systems : www.buildingsystems.basf.com.
 - 6. Tremco, Inc : www.tremcosealants.com.
 - 7. Substitutions: See Section 01 6000 - Product Requirements.
- B. Polyurethane Sealants:
 - 1. Bostik Inc : www.bostik-us.com.
 - 2. Pecora Corporation : www.pecora.com.

3. BASF Construction Chemicals-Building Systems : www.buildingsystems.basf.com.
 4. Tremco, Inc : www.tremcosealants.com.
 5. Substitutions: See Section 01 6000 - Product Requirements.
 6. Morton International, Inc .
 7. Pecora Corporation : www.pecora.com.
 8. BASF Construction Chemicals-Building Systems : www.chemrex.com.
 9. Substitutions: See Section 01 6000 - Product Requirements.
- C. Acrylic Sealants (ASTM C920):
1. Tremco Global Sealants : www.tremcosealants.com.
 2. Substitutions: See Section 01 6000 - Product Requirements.
- D. Butyl Sealants:
1. Bostik Inc : www.bostik-us.com.
 2. Pecora Corporation : www.pecora.com.
 3. Tremco, Inc : www.tremcosealants.com.
 4. Substitutions: See Section 01 6000 - Product Requirements.
- E. Acrylic Emulsion Latex Sealants:
1. Bostik Inc : www.bostik-us.com.
 2. Pecora Corporation : www.pecora.com.
 3. BASF Construction Chemicals-Building Systems : www.buildingsystems.basf.com.
 4. Tremco, Inc : www.tremcosealants.com.
 5. Substitutions: See Section 01 6000 - Product Requirements.

2.02 SEALANTS

- A. Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, nondrying, nonskinning, noncuring.
1. Applications: Use for:
 - a. Concealed sealant bead in sheet metal work.
 - b. Concealed sealant bead in flashing overlaps.
- B. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable.
1. Color: Standard colors matching finished surfaces.
 2. Applications: Use for:
 - a. Interior wall and ceiling control joints.
 - b. Joints between door and window frames and wall surfaces.
 - c. Other interior joints for which no other type of sealant is indicated.
- C. Bathtub/Tile Sealant: White silicone; ASTM C920, Uses I, M and A; single component, mildew resistant.
1. Applications: Use for:
 - a. Joints between plumbing fixtures and floor and wall surfaces.
- E. Interior Floor Joint Sealant: Polyurethane, self-leveling; ASTM C920, Grade P, Class 25, Uses T, M and A; single component.
1. Approved by manufacturer for wide joints up to 1-1/2 inches.
 2. Color: Standard colors matching finished surfaces.
 3. Applications: Use for:
 - a. Expansion joints in floors.
- F. Self-leveling or Non-sag Silicone Sealant: ASTM D5893, Type S, Grade NS or P, Class 100/50 minimum; Uses T, A, G, M, O; single component, neutral curing, non-bleeding.
1. Color: To be selected by TAP Architecture from manufacturer's standard range.
 2. Movement Capability: Plus 100 percent, minus 50 percent.
 3. Service Temperature Range: -80 to 350 degrees F (-62 to 177 degrees C).
 4. Shore A Hardness Range: 5 to 10.
 5. Applications: Use for:
 - a. Tilt-up wall joints.

- G. Silicone Sealant: ASTM C920, Grade NS, Class 25 minimum; Uses NT, A, G, M, O; single component, solvent curing neutral curing, non-sagging, non-staining, fungus resistant, non-bleeding, USDA approved.
 - 1. Color: Color as selected.
 - 2. Movement Capability: Plus and minus 25 percent.
 - 3. Service Temperature Range: -65 to 180 degrees F (-54 to 82 degrees C).
 - 4. Shore A Hardness Range: 15 to 35.
 - 5. Applications: Use for:
 - a. All kitchen equipment junctures.
 - b. Splash to top and sink to top locations where sinks exist.
- H. Concrete Paving Joint Sealant: Refer to civil drawings and specifications.
- I. Hybrid Sealant option: Sily-Terminated Ether: Hybrid type sealants are acceptable except for structural glazing and may be substituted upon approval for selected sealants above when suitable for the application. Submit hybrid data and specified sealant for comparison of properties when request is submitted.

2.03 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Round foam rod compatible with sealant; ASTM D1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Protect elements surrounding the work of this section from damage or disfigurement.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Perform acoustical sealant application work in accordance with ASTM C919.
- D. Measure joint dimensions and size joint backers to achieve the following, unless otherwise indicated:
 - 1. Width/depth ratio of 2:1.
 - 2. Neck dimension no greater than 1/3 of the joint width.
 - 3. Surface bond area on each side not less than 75 percent of joint width.
- E. Install bond breaker where joint backing is not used.
- F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- G. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- H. Tool joints concave.

- I. Tape off each side of joint when needed to hold straight crisp line and true joint. Remove when overage separates cleanly from sealant bed without separating sealant remaining in joint from edge of joint.

3.04 CLEANING

- A. Clean adjacent soiled surfaces.

3.05 PROTECTION

- A. Protect sealants until cured. Contamination by excessive dust accumulation into surface which cannot be removed due to dust embedment sealant surface film before it is cured will be cause for rejection of sealant and require re-application / correction at substantial completion.

END OF SECTION

SECTION 08 1113

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated steel doors and frames, insulated doors.
- B. Steel glazing frames where indicated.
- D. Accessories, including glazing and silencers.

1.02 RELATED REQUIREMENTS

- A. Section 04 2000 - Unit Masonry: frames installed in masonry as work progresses.
- B. Section 08 7100 - Door Hardware.
- C. Section 08 8000 - Glazing: Glass for doors and borrowed lites where borrowed lites are indicated.
- D. Section 09 9000 - Painting and Coating: Field painting.

1.03 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2003.
- B. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames; 2003.
- C. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 1998 (R2004).
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2010.
- E. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames; 2006.
- F. DHI A115 Series - Specifications for Steel Doors and Frame Preparation for Hardware; Door and Hardware Institute; current edition (ANSI/DHI A115 Series).
- G. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers; 2007.
- H. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2010.
- I. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association; 2008.
- J. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.

- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store in accordance with NAAMM HMMA 840.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Steel Doors and Frames:
 - 1. Assa Abloy Ceco, Curries, or Fleming: www.assaabloydss.com.
 - 2. Ceco Door Products: www.cecodoor.com.
 - 3. Steelcraft: www.steelcraft.com.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 DOORS AND FRAMES

- A. Requirements for All Doors and Frames:
 - 1. Accessibility: Comply with ANSI/ICC A117.1.
 - 2. Door Top Closures: Flush with top of faces and edges.
 - 3. Door Edge Profile: Beveled on both edges.
 - 4. Door Texture: Smooth faces.
 - 5. Hardware Preparation: In accordance with BHMA A156.115, with reinforcement welded in place, in addition to other requirements specified in door grade standard.
 - 6. Galvanizing for Units in Wet Areas: All components hot-dipped zinc-iron alloy-coated (galvannealed), manufacturer's standard coating thickness.
 - 7. Finish: Factory primed, for field finishing unless galvanized.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 STEEL DOORS

- A. Exterior Doors:
 - 1. Grade: ANSI A250.8 Level 3, physical performance Level A, Model 2, seamless.
 - 2. Core: Polystyrene foam.
 - 3. Galvanizing: All components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness.
 - 4. Weatherstripping: Separate, see Section 08 71 00.

2.04 STEEL FRAMES

- A. General:
 - 1. Comply with the requirements of grade specified for corresponding door.
 - a. Frames for Wood Doors: Comply with frame requirements specified in ANSI A250.8 for Level 3, 16 gage doors, 14 gage frames mortar filled.
 - 2. Finish: Factory primed, for field finishing except when galvanized frames are supplied.
 - 3. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.
 - 4. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches (100

- mm) high to fill opening without cutting masonry units.
5. Frames Wider than 48 Inches (1200 mm): Reinforce with steel channel fitted tightly into frame head, flush with top.
 6. Jamb returns: provide frames with jamb returns as indicated.
- B. Exterior Door Frames: Fully welded.
1. Galvanizing: All components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness.
- C. Interior Door Frames, Non-Fire-Rated: Face welded type.
- D. Interior Door Frames, Fire-Rated: Fully welded type.
1. Fire Rating: Same as door, labeled.
- E. Frames for Interior Glazing or Borrowed Lights: Construction and face dimensions to match door frames, and as indicated on drawings.

2.05 ACCESSORY MATERIALS

- A. Glazing: As specified in Section 08 8000.
- B. Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered corners; prepared for countersink style tamper proof screws.
- C. Grout for Frames: as specified in Section 04 2000.
- E. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.
- F. Temporary Frame Spreaders: Provide for all factory- or shop-assembled frames.

2.06 FINISH MATERIALS

- A. Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard.
- B. Bituminous Coating: Asphalt emulsion or other high-build, water-resistant, resilient coating.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.

3.02 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.03 INSTALLATION

- A. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.
- B. In addition, install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.
- D. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames. Build frames into walls as construction

of wall progresses.

- E. Coordinate installation of hardware.
- F. Coordinate installation of glazing.
- G. Coordinate installation of electrical connections to electrical hardware items when electrified hardware is indicated.
- H. Touch up damaged factory finishes.

3.04 TOLERANCES

- A. Clearances Between Door and Frame: As specified in ANSI A250.8.
- B. Maximum Diagonal Distortion: 1/16 in (1.5 mm) measured with straight edge, corner to corner.

3.05 ADJUSTING

- A. Adjust for smooth and balanced door movement.

3.06 SCHEDULE

- A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

SECTION 08 7100

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical door hardware.
- C. Related Sections:
 - 1. Division 08 Section "Hollow Metal Doors and Frames".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. FEMA P-361 2015 - Design and Construction Guidance for Community Safe Rooms.
 - 3. ICC 500-2014, ICC/NSSA Standard for the Design and Construction of Storm Shelters.
 - 4. ICC/IBC - International Building Code.
 - 5. NFPA 70 - National Electrical Code.
 - 6. NFPA 80 - Fire Doors and Windows.
 - 7. NFPA 101 - Life Safety Code.
 - 8. NFPA 105 - Installation of Smoke Door Assemblies.
 - 9. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
 - 1. ANSI/BHMA Certified Product Standards - A156 Series.
 - 2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
 - 3. ANSI/UL 294 - Access Control System Units.

4. UL 305 - Panic Hardware.
5. ANSI/UL 437- Key Locks.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
 - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
 - b. Complete (risers, point-to-point) access control system block wiring diagrams.
 - c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:
 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).
- C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
1. Function of building, purpose of each area and degree of security required.
 2. Plans for existing and future key system expansion.
 3. Requirements for key control storage and software.
 4. Installation of permanent keys, cylinder cores and software.
 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 3. Review sequence of operation narratives for each unique access controlled opening.
 4. Review and finalize construction schedule and verify availability of materials.
 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Ten years for mortise locks and latches.
 - 2. Five years for exit hardware.
 - 3. Twenty five years for manual overhead door closer bodies.
 - 4. Two years for electromechanical door hardware.

1.8 MAINTENANCE SERVICE

- 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 door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
 1. Quantity: Provide the following hinge quantity:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 4. Hinge Options: Comply with the following:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
 5. Manufacturers:
 - a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

2.3 POWER TRANSFER DEVICES

- A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug

directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:

- a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - QC (# wires) Option.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.

- 1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
- 2. Furnish dust proof strikes for bottom bolts.
- 3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
- 4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.

5. Manufacturers:

- a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

B. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

- 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
- 2. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.

3. Manufacturers:

- a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.5 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

1. Manufacturers:

- a. Sargent Manufacturing (SA).

C. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:

- 1. Threaded mortise cylinders with rings and cams to suit hardware application.

2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
4. Tubular deadlocks and other auxiliary locks.
5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
6. Keyway: Manufacturer's Standard.

D. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.

E. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).

F. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.6 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Manufacturers:
 - a. Lund Equipment (LU).
 - b. Telkee (TK).

2.7 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

1. Where specified, provide status indicators with highly reflective color and wording for "locked/unlocked" or "vacant/occupied" with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1" x 0.6" with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.

2. Manufacturers:
 - a. Sargent Manufacturing (SA) - 8200 Series.

2.8 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 2. Strikes for Bored Locks and Latches: BHMA A156.2.
 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 4. Dustproof Strikes: BHMA A156.16.

2.9 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
 4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

- B. Door Closers, Surface Mounted (Large Body Cast Iron): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control.

1. Manufacturers:
 - a. Norton Door Controls (NO) - 9500 Series.

2.10 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
 - a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.11 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 1. Manufacturers:

- a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.12 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
 - 1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

2.13 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.14 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install 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 specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.5 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.6 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.7 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
 1. Quantities listed are for each pair of doors, or for each single door.
 2. The supplier is responsible for handling and sizing all products.
 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
- B. Manufacturer's Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. SU - Securitron
4. RO - Rockwood
5. SA - SARGENT
6. RF - Rixson
7. NO - Norton
8. OT - Other

Hardware Sets

Set: 1.0

Doors: 100

2 Hinge, Full Mortise	T4A3386 4-1/2" x 4-1/2" NRP	US32D	MK
1 Hinge, Full Mortise, Electric	T4A3386 4-1/2" x 4-1/2" QC12	US32D	MK
1 Fail Secure Lock	8271 RX LE2L	US32D	SA
1 Surface Closer	9500ST	689	NO
1 Kick Plate	K1050 10" x 2" LDW CSK BEV	US32D	RO
1 Wall Stop	400	US26D	RO
1 Threshold	253x3AFG		PE
1 Gasketing	379CR TKSP		PE
1 Sweep	3452CNB TKSP8		PE
1 ElectroLynx Harness	QC-C206		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Card Reader	By Security		OT
1 Power Supply	By Security		OT
1 Door Position Switch	DPS		SU

Notes: Access by card reader or manual key. Always free egress.

Set: 2.0

Doors: 102, 103

2 Hinge, Full Mortise	T4A3386 4-1/2" x 4-1/2" NRP	US32D	MK
1 Hinge, Full Mortise, Electric	T4A3386 4-1/2" x 4-1/2" QC12	US32D	MK
1 Fail Secure Lock	8271 RX LE2L	US32D	SA
1 Surface Closer	9500ST	689	NO
1 Kick Plate	K1050 10" x 2" LDW CSK BEV	US32D	RO
1 Threshold	253x3AFG		PE
1 Gasketing	379CR TKSP		PE
1 Sweep	3452CNB TKSP8		PE
1 ElectroLynx Harness	QC-C206		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Power Supply	By Security		OT
1 Door Position Switch	DPS		SU

Notes: Doors to be scheduled unlocked via the access control schedule.

Set: 3.0

Doors: 104

2 Hinge, Full Mortise	T4A3386 4-1/2" x 4-1/2" NRP	US32D	MK
1 Hinge, Full Mortise, Electric	T4A3386 4-1/2" x 4-1/2" QC12	US32D	MK
1 Fail Secure Lock	PHR NAC 82281 LE2L	US32D	SA
1 Surface Closer	9500ST	689	NO
1 Wall Stop	400	US26D	RO
1 Threshold	253x3AFG		PE
1 Gasketing	379CR TKSP		PE
1 Sweep	3452CNB TKSP8		PE
1 ElectroLynx Harness	QC-C206		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Power Supply	By Security		OT
1 Door Position Switch	DPS		SU

Notes: Door to be scheduled unlocked via the access control schedule. Electrified lock has deadbolt privacy function - engaging the deadbolt inside disables scheduled unlock and secures door.

Set: 4.0

Doors: 101

2 Hinge, Full Mortise	T4A3386 4-1/2" x 4-1/2" NRP	US32D	MK
1 Hinge, Full Mortise, Electric	T4A3386 4-1/2" x 4-1/2" QC12	US32D	MK
1 Fail Secure Lock	8271 RX LE2L	US32D	SA
1 Surface Closer	9500ST	689	NO
1 Wall Stop	400	US26D	RO
1 ElectroLynx Harness	QC-C206		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Card Reader	By Security		OT
1 Power Supply	By Security		OT
1 Door Position Switch	DPS		SU
3 Silencer	608-RKW		RO

Notes: Access by card reader or manual key. Always free egress.

END OF SECTION 087100

SECTION 09 2116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal ceiling framing.
- B. Joint treatment and accessories.
- C. Textured finish system.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Wood blocking for support of wall-mounted equipment; exterior gypsum sheathing products .
- B. Section 07 9005 - Joint Sealers: Acoustic sealant.
- C. Section 09 9000 - Paints and Coatings: Final finish over texturing systems.

1.03 REFERENCE STANDARDS

- A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2015.
- B. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2014.
- C. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2015.
- D. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2013.
- E. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.
- F. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2014.
- G. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2014.
- H. ASTM C1629/C1629M - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels; 2015.
- I. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.
- J. ASTM D3678 - 97(2008)e1 Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Interior-Profile Extrusions
- K. ASTM E72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction ; 2010.
- L. GA-216 - Application and Finishing of Gypsum Board; 2013.
- M. UL (FRD) - Fire Resistance Directory; current edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Product Data: Provide data on metal framing and accessories.
- C. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.
- D. Test Reports: For stud framing products that do not comply with ASTM C645 or ASTM C754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.
- E. Samples: Submit two samples of three variations of degree of specified texture on gypsum board finished, 12 by 12 inches (300 by 300 mm) in size, illustrating finish texture. Selected

degree will be signed by project representatives as control sample, with one unit returned to Contractor and one unit retained on file in Architect's office for reference.

1.05 QUALITY ASSURANCE

- A. Perform in accordance with ASTM C 840. Comply with requirements of GA-600 for fire-rated assemblies.
- B. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum three years of experience.
- C. Copies of Documents at Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.
 - 1. Refer to plans for appropriate UL assembly and location.

1.06 PRE-INSTALLATION MEETING

- A. Conduct pre-installation meeting with all affected trades in attendance to discuss acoustic, fire, tile backing, painting, and other trade requirements and coordination.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C 840 and GA-216. All gypsum board used on project shall be from a single manufacturer. All metal stud and galvanized furring channel framing assemblies shall be from a single manufacturer.

2.02 MANUFACTURERS

- A. Substitutions: See Section 01 6000 Product Requirements.
- B. Gypsum Board:
 - 1. G-P Gypsum Corporation : www.gp.com.
 - 2. National Gypsum Company : www.nationalgypsum.com.
 - 3. USG Corporation : www.usg.com.
- C. Metal Framing:
 - 1. Clark Steel Framing Systems : www.clarksteel.com.
 - 2. Dale/Incor : www.daleincor.com.
 - 3. Dietrich Metal Framing, Inc : www.dietrichindustries.com.
 - 4. Marino-Ware : www.marinoware.com.
 - 5. Telling Industries: www.buildstrong.com
- D. Metal Framing Connectors and Accessories:
 - 1. Same manufacturer as framing.

2.03 METAL FRAMING MATERIALS

- A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf (240 Pa). Sizes indicated on drawings are minimum desired.
 - 1. Exception: The minimum metal thickness and section properties requirements of ASTM C 645 are waived provided steel of 40 ksi (275 MPa) minimum yield strength is used, the metal is continuously dimpled, the effective thickness is at least twice the base metal thickness, and maximum stud heights are determined by testing in accordance with ASTM E 72 using assemblies specified by ASTM C 754.
 - 2. Furring: Hat-shaped sections, minimum depth of 7/8 inch (22 mm).

2.04 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 - 1. CertainTeed Corporation : www.certainteed.com.
 - 2. Georgia-Pacific Gypsum : www.gpgypsum.com.
 - 3. National Gypsum Company : www.nationalgypsum.com.
 - 4. USG Corporation : www.usg.com.

- B. Moisture Resistant Gypboard: All restrooms ceilings: Water-resistant gypsum backing board as defined in ASTM C 1396/C 1396M; sizes to minimum joints in place; ends square cut.
 - 1. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - 2. Type: Regular and Type X, in locations indicated.
 - 3. Thickness: 5/8 inch (16 mm).
 - 4. Edges: Tapered.
 - 5. Products:
 - a. CertainTeed Corporation; ProRoc Brand Moisture & Mold Resistant Gypsum Board.
 - b. National Gypsum Company; Gold Bond Brand XP Gypsum Board.
 - c. Temple-Inland Inc; ComfortGuard WR.
 - d. USG Corporation; Sheetrock Brand Mold Tough Gypsum Panels.

2.05 ACCESSORIES

- A. General: accessories listed by name are USG products and intended to be design standard, not proprietary.
- B. Edge Trim: LC bead, as defined in ASTM C 840.
 - 1. No. 200-A Metal Trim
 - 2. Utilize similar PVC plastic type profile at locations designated such as butting to window jambs subject to moisture condensation: Fillable "L" bead no. 221 series by Plastic Components, Inc. or equal (www.plasticcomponents.com) conforming to ASTM D3678 and C1047.
- C. "J" trim: PVC plastic "J" bead 200X series by Plastic Components, Inc. or equal (www.plasticcomponents.com) with 1" back flange and 1/2" face return conforming to ASTM D3678 and C1047.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 - 1. Ready-mixed vinyl-based joint compound.
 - 2. PER-A-TAPE Joint Reinforcing Tape with ready mix joint compound.
- E. Textured Finish Materials: Latex-based compound; plain.
 - 1. Gypsum Board Ceilings: orange peel.
- F. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
- G. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion resistant.
- H. Screws: ASTM C 1002; self-piercing tapping type ; cadmium-plated for exterior locations.
- I. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
- J. Channel stiffener: Cold-rolled 1-1/2" x 16 gauge channel with bridging clips.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
 - 1. Level ceiling system to a tolerance of 1/1200.
 - 2. Laterally brace entire suspension system.
- C. Blocking: Install blocking for support of accessories and for plumbing fixtures where in-wall carriers are not provided in accordance with Section 06 1000.

3.04 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- D. Installation at ceilings on 1 ½" Metal Furring Channels over wood truss framing: Use screws for attachment of gypsum board except face layer of non-rated double-layer assemblies, which may be installed by means of adhesive lamination.
- E. Moisture Protection: Treat cut edges and holes in gypsum board butting cementitious backer board with sealant. Coordinate with Section 09 3000 for installation in proper sequence and order with tile operations.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Corner Beads: Install at external corners, using longest practical lengths.
- B. Edge Trim: Install at locations where gypsum board abuts dissimilar materials .

3.06 JOINT TREATMENT

- A. Finish gypsum board in scheduled areas in accordance with levels defined in ASTM C 840 and as scheduled below.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

3.07 TEXTURE FINISH

- A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match approved sample.

3.08 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

3.09 FINISH LEVEL SCHEDULE

- A. Level 1: Above finished ceilings concealed from view and as otherwise indicated. Shaft walls, included unless greater finish level is required by UL assembly design criteria.
- B. Level 2: Utility areas and areas behind cabinetry.
- C. Level 3: Walls scheduled to receive textured wall finish.
- D. Level 4: Walls and ceilings scheduled to receive flat or eggshell paint finish and as otherwise indicated.
- E. Level 5: Walls and ceilings scheduled to receive semi-gloss or gloss paint finish or where light cascading directly down wall can show wall imperfections, such as a wall perpendicular to and within 2' of a window jamb.

END OF SECTION

**SECTION 09 9000
PAINTING AND COATING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints and other coatings.
- C. Scope: Finish elements to extent indicated on drawings. Finish newly installed interior and exterior surfaces exposed to view unless fully factory-finished and unless otherwise indicated and as follows:
 - 1. Items indicated to be painted on drawings or schedules.
 - 2. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 3. Exposed surfaces of steel angles and steel elements.
 - 4. Paint hollow metal doors and frames and grills.
 - 4. Mechanical and Electrical:
 - a. In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated not to paint.
 - b. In finished areas, paint shop-primed items.
 - c. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically so indicated to paint; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Non-metallic roofing and flashing; pre-finished flashings; galvanized flashings not exposed to view or otherwise noted to not to paint.
 - 6. Stainless steel, anodized aluminum, bronze, terne, and lead items.
 - 7. Granite and other natural stones.
 - 8. Floors, unless specifically so indicated.
 - 9. Ceramic and other tiles.
 - 10. Glass.
 - 11. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 05 5000 - Metal Fabrications: Shop-primed items.
- B. Section 09 2616 - Gypsum Board Assemblies: Texturing requirements for locations indicated on the Construction Documents to receive wall texture.
- C. Section 22 0553 - Identification for Plumbing Piping and Equipment: Painted identification.
- D. Section 26 0553 - Identification for Electrical Systems: Painted identification.
- E. Division 32 Sections: painted pavement markings.

1.03 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

1.04 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this section.

1.05 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Product Data: Provide data on all finishing products, including VOC content.
- C. Samples: Submit two paper chip samples, 6" x 6" nominal in size illustrating specified colors and textures and sheens to be expected for each surface finishing product scheduled.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum five years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable code for flame and smoke rating requirements for products and finishes.

1.08 MOCK-UP

- A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.
- B. Paint mockup room and others areas needed to demonstrate stages of finish and primer and quality of work for various elements to be painted. Locate where indicated.
- C. Mock-up may remain as part of the work if able to be incorporated without showing a patch.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.10 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Minimum Application Temperatures for Paints: 45 degrees F (7 degrees C) for interiors; 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.
- D. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

1.11 EXTRA MATERIALS

- A. See Section 01 6000 - Product Requirements, for additional provisions.
- B. Supply 1 gallon (4 L) of each color; store where directed.
- C. Label each container with color in addition to the manufacturer's label.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Paint Systems: Manufacturers and Colors

1. Product specifications listed in this Section and identified on Room Finish schedules are based on Sherwin-Williams Co. or Benjamin Moore products unless otherwise specifically indicated.
2. Manufacturer and color selection on schedule is listed for color reference only and is not intended to require proprietary product use. Colors from any supplier used are intended to match the colors listed on the schedule.
3. Products listed in this specification of the base manufacturer will be the quality standard used for any of the products supplied by alternate manufacturers.
4. Other acceptable manufacturers:
 - a. Pittsburg Paints.
 - b. Porter International.
 - c. PPG Paints: www.ppgpaints.com.

C. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
 1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 3. Supply each coating material in quantity required to complete entire project's work from a single production run.
 4. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer. Primers listed provide bid quality, but may require adjustment depending on substrate encountered. Make adjustments at no additional cost to Owner.
- C. Volatile Organic Compound (VOC) Content:
 1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Architectural coatings VOC limits of Tecumseh, Oklahoma.
 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- D. Colors: as indicated on the finish schedule.
 1. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under unless otherwise noted.

2.03 SCHEDULE - INTERIOR / EXTERIOR PAINT SYSTEMS

- A. Sheens listed on finish schedule are desired sheens. If a particular product by a manufacturer is not available in specified sheen, consult architect prior to order with available sheens for selection.
- B. Paint Systems and Locations. Refer finish schedules for additional information.
- C. Exterior Paint Systems:
 1. Existing New or Existing Exposed Steel:
 - a. Spot Prime Bare Areas: SW 66-310 Series, Pro-Cryl Universal Metal Primer.
 - b. Finish: 2 coats SW B66-650 Series, High Performance Acrylic Semi-Gloss.

1. Existing or new HM Doors and Frames:
 - a. Primer: SW 66-310 Series, Pro-Cryl Universal Metal Primer.
 - b. Finish: 2 coats SW B66-650 Series, High Performance Acrylic Semi-Gloss.
- D. Masonry: (Interior and Exterior) Concrete masonry units (CMU), cinder or concrete block.
 1. Latex Systems:
 - a. Satin Finish:
 - 1) 1st Coat: Sherwin-Williams PrepRite Block Filler, B25W25:
www.sherwin-williams.com/#sle.
(a) 75 to 125 sq ft/gal (1.8 to 3.1 sq m/L).
 - 2) 2nd and 3rd Coat: Sherwin-Williams A-100 Exterior Latex Satin, A82 Series: www.sherwin-williams.com/#sle.
(a) 4 mils wet, 1.5 mils dry per coat.
- E. Interior Paint Systems:
 1. Interior Ferrous HM Doors and Frames, Miscellaneous Metal, etc. pre-primed or galvanized:
 - a. Primer: SW 66-310 Series, Pro-Cryl Universal Metal Primer. (Spot prime bare areas, verify compatibility with shop primer).
 - b. Finish: 2 coats SW B66-650 Series, Pro Industrial High Performance Acrylic Semi-Gloss.
 2. Interior Drywall Ceilings:
 - a. Primer: SW B28W2600 ProMar 200 Zero VOC Interior Latex Primer.
 - b. Finish: 2 coats SW B30-2600 Series ProMar 200 Zero VOC Interior Latex Flat.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of coatings until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials and factory or shop applied primers.
- E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 1. Gypsum Wallboard: 12 percent.
 2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Surfaces: Correct defects and clean surfaces which affect work of this section.
- E. Seal surfaces that might cause bleed through or staining of topcoat.

- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Concrete and Unit Masonry Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- H. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair.
- I. Uncorroded Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Prime paint entire surface; spot prime after repairs.
- J. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- K. Interior Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.
- L. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces unless fully galvanized.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's instructions.
- C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- E. Apply each coat to uniform appearance.
- F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- G. Apply final coat after major punch list is complete. Allow for touch up.
- H. Sand metal surfaces lightly between coats to achieve required finish.
- I. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- J. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- K. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection.

3.05 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.06 PROTECTION

- A. Protect finished coatings until completion of project.

B. Touch-up damaged coatings after Substantial Completion.

END OF SECTION

SECTION 10 1400 EXTERIOR SIGNAGE

SUMMARY

1.01 SECTION INCLUDES:

- A. All room identification, and signage for ADA and life safety code compliance.
 - 1. Related Sections:
- B. Division 1: Administrative, procedural and temporary work requirements.

1.02 REFERENCES

- A. Signs and their installation shall comply with applicable provisions of the latest edition of the following standards and with requirements of authorities having jurisdiction:
 - 1. ADAAG – Americans with Disabilities Act Accessibility Guidelines; US Architectural and Transportation Barriers Compliance Board.
 - 2. International Code Council/American National Standards Institute A117.1-Standard on Accessible and Usable Buildings Facilities.
 - 3. National Fire Protection Association 101 Life Safety Code.

1.03 SUBMITTALS

- A. Submittals for Review:
 - 1. Signage schedule in manufacturer's format for verification of text/copy.
 - 2. Approval drawings showing materials, construction detail, lay-out, copy, size and mounting methods.
 - 3. Engineering drawings for each sign type.
 - 4. Sample of two sign types for verification of materials, color, pattern, overall quality, and for adherence to drawings and requirements indicated.

1.04 QUALIFICATIONS

- A. Manufacturer specializing in manufacturing the products specified in this section with minimum five years experience. Obtain signs from one source and a single manufacturer.

1.05 WARRANTY

- A. Provide manufacturer's warranty against defects in materials and workmanship for minimum 5 years.

PRODUCTS

2.01 MANUFACTURER

- A. Approved Manufacturer's; Signage will be exterior rated, Architect to select from manufacturer's standard library.
 - 1. Takeform
 - 2. InPro
- B. Substitutions: Bidder must obtain prior written approval from the Architect and/or Owner to bid alternates or substitutions to the specification.

2.02 SIGN STANDARDS

- A. It is the intent of these specifications to match existing signage if applicable. Signs shall be designed for exterior use and shall be rated for direct UV, weather, temperature fluctuations and resistant to vandalism. While the Owner may not obtain all signs and sign types, the signage contractor shall design and submit approval drawings for all.
- B. Engineered and Tested:
 - 1. The signage system shall have undergone rigorous testing to ensure longevity and optimal performance. Testing shall include environmental testing to ensure that materials can withstand changes in temperature and humidity without distortion as well as testing to ensure resistance to chemicals and UV effects. Further, mechanical testing shall ensure

that the tensile and pull-out strength of mounting hardware is adequate to ensure a safe installation. Test data shall be included with submittals.

- C. Typography:
 - 1. Type style: Copy shall be a true, clean, accurate reproduction of typeface(s) specified. Upper and lower case or all caps shall be as indicated in Sign Type drawings and Signage Schedule. Letter spacing to be normal and interline spacing shall be set by manufacturer.
 - 2. Arrows, symbols and logo art: To be provided in style, sizes, colors and spacing as shown in drawings.
 - 3. Grade II Braille utilizing perfectly round, clear insertion beads.
- D. Color and Finishes:
 - 1. Colors, patterns and artwork: Match Existing and approved by Architect.
 - 2. Finishes are to meet current federal ADA and all state and local requirements.

2.03 SIGNS

- A. Signage System:
 - 1. The signage shall meet all tactile requirements in adherence to ADA specifications.
 - 2. All signs shall have a matching appearance and constructed utilizing the same manufacturing process to ensure a consistent look throughout.
- B. Materials:
 - 1. Manufacturer's standard for exterior rated sign for specified application.
- C. Standard Colors:
 - 1. Face/background color shall be exterior grade. Architect to select.
 - 2. Standard tactile colors shall match manufacturer's ADA standard color selection.

EXECUTION

3.01 SITE VISITS

- A. Site visits –site visits shall be required by the sign contractor:
 - 1. Prior to submission of bid for site assessment and evaluation.
 - 2. Post award for the purposes of meeting with Owners and project manager.
 - 3. Final walk-through and punchlist.

3.02 CODE COMPLIANCE

- A. It shall be the responsibility of the successful bidder to meet any and all local, state, and federal code requirements in fabricating and installing signs.

3.03 DELIVERY, STORAGE, PROTECTION

- A. Package to prevent damage or deterioration during shipment, handling, storage and installation. Products should remain in original packaging until removal is necessary. Store products in a dry, indoor location.

3.04 EXAMINATION

- A. Installer shall examine signs for defects, damage and compliance with specifications. Installation shall not proceed until unsatisfactory conditions are corrected.

3.05 INSTALLATION

- A. General: Installation locations shall be in accordance with ADA specifications. Locate signs where indicated using mounting methods in compliance with manufacturer's written instructions:
- B. The signage contractor shall coordinate installation schedules with the Owner and/or Construction Manager.
 - 1. Installation shall be performed by manufacturer's personnel trained and certified in manufacturer's methods and procedures.
 - 2. The signage contractor shall submit a CAD generated location plan noting the location of all signage and cross referenced to message schedule or plots for architect's approval.

3. Installer to conduct a pre-installation survey prior to manufacturing to verify copy and sign location. Each location shall be noted using a low tack vinyl reproduction of actual sign. Full scale renderings of directories and directionals shall also be provided. Any location discrepancy or message issues shall be submitted to architect for review.
4. Signs shall be level, plumb, and at heights indicated with sign surfaces free from defects.
5. Upon completion of the work, signage contractor shall remove unused or discarded materials, containers and debris from site.

END OF SECTION

SECTION 10 2113.19
PLASTIC TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Solid plastic toilet compartments.
- B. Urinal screens.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Blocking and supports.

1.03 REFERENCE STANDARDS

- A. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2015.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on panel construction, hardware, and accessories.
- C. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall supports, door swings.
- D. Samples: Submit two samples of partition panels, 2 by 2 inch in size illustrating panel finish, color, and sheen.
- E. Manufacturer's Installation Instructions: Indicate special procedures.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Solid Plastic Toilet Compartments:
 - 1. Scranton Products; Hiny Hiders Partitions: www.scrantonproducts.com/#sle.

2.02 PLASTIC TOILET COMPARTMENTS

- A. Solid Plastic Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), tested in accordance with NFPA 286; floor-mounted braced.
 - 1. Color: Single color as selected. Architect to select from standard color range.
 - 2. Doors:
 - a. Thickness: 1 inch.
 - b. Width: 24 inch.
 - c. Width for Handicapped Use: 36 inch, out-swinging.
 - d. Height: 55 inch.
 - 3. Panels:
 - a. Thickness: 1 inch.
 - b. Height: 55 inch.
 - c. Depth: As indicated on drawings.
 - 4. Pilasters:
 - a. Thickness: 1 inch.
 - b. Width: As required to fit space; minimum 3 inch.
 - 5. Screens: Without doors; to match compartments; mounted to wall with continuous panel brackets.

2.03 ACCESSORIES

- A. Pilaster Shoes: Stainless steel, satin finish, 3 inches high; concealing floor fastenings.
- B. Head Rails: Extruded aluminum, anti-grip profile.
 - 1. Size: Manufacturer's standard size.

- C. Wall and Pilaster Brackets: Stainless steel; manufacturer's standard type for conditions indicated on drawings.
- D. Attachments, Screws, and Bolts: Stainless steel, tamper proof type.
 - 1. For attaching panels and pilasters to brackets: Through-bolts and nuts; tamper proof.
- E. Hinges: Stainless steel, manufacturer's standard finish.
 - 1. Continuous-type hinge, self closing.
- F. Door Hardware: Stainless steel, manufacturer's standard finish.
 - 1. Door Latch: Slide type with exterior emergency access feature.
 - 2. Door Strike and Keeper with Rubber Bumper: Mount on pilaster in alignment with door latch.
 - 3. Provide door pull for out swinging doors.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify correct spacing of and between plumbing fixtures.
- C. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

- A. Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions.
- B. Maintain 3/8 inch to 1/2 inch space between wall and panels and between wall and end pilasters.
- C. Attach panel brackets securely to walls using anchor devices.
- D. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.
- E. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.03 TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch.
- B. Maximum Variation From Plumb: 1/8 inch.

3.04 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.
- B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.
- C. Adjust adjacent components for consistency of line or plane.

END OF SECTION

**SECTION 10 2800
TOILET, BATH, AND LAUNDRY ACCESSORIES**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Public-use washroom accessories.
 - 2. Underlavatory guards.

1.2 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 - 2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 - 3. Include electrical characteristics.

1.4 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For manufacturer's special warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For accessories to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

- A. Source Limitations: Obtain public-use washroom accessories from single source from single manufacturer.

- B. Grab Bars: ASI 3800 Series, 1 ½" Diameter; Snap Flange Grab Bars; <https://americanspecialties.com/product/snap-flange-3800-series/>
1. Stainless Steel Satin Finish; 18" / 36" / 42" lengths. Refer to Interior Elevations.
- C. Mirrors: ASI 0620 Series, Stainless Steel Chan-Lok Frame Mirror; <https://americanspecialties.com/product/stainless-steel-chan-lok-plate-glass-mirrors-variable-sizes-0620/> ,
1. Small size (18"x30", 0600-1830) and large size (48"x30", 0600-4830), Lexan Dura-Mirror - 1/4" (6.4mm) thick polycarbonate sheet glazing.
- D. Toilet Tissue Dispenser: ASI 20030 Series, Twin Hide-a-Roll Toilet Tissue Dispenser, <https://americanspecialties.com/product/roval-twin-hide-a-roll-toilet-tissue-dispenser-surface-mounted-20030/> .
1. Stainless steel satin finish
- E. Hand Dryer: ASI 0192-1-93, Turbo Swift ADA Compliant High-Speed Hand Dryer, <https://americanspecialties.com/product/turbo-swift-ada-compliant-high-speed-hand-dryer-0192-1-93/> .
1. Stainless steel satin finish
- F. Soap Dispenser: ASI 0347 Liquid Soap Dispenser Vertical Surface Mounted, <https://americanspecialties.com/product/liquid-soap-dispenser-vertical-surface-mounted/>
1. Stainless steel satin finish
- G. Robe/Bag Hook (at inside of every toilet partition door): ASI 0714, Coat Hook and Bumper Surface Mounted, <https://americanspecialties.com/product/coat-hook-and-bumper-chrome-plated-brass-surface-mounted-0714/> .
1. Chrome plate brass
- H. Sanitary Napkin Disposal: ASI 0473-1A, Sanitary Napkin Disposal with Lock – Surface Mounted, <https://americanspecialties.com/product/sanitary-napkin-disposal-with-lock-surface-mounted-0473-1a/>.
1. Stainless steel satin finish

2.3 UNDERLAVATORY GUARDS

- A. Underlavatory Guard :
1. Description: Insulating pipe covering for supply and drain piping assemblies that prevents direct contact with and burns from piping; allow service access without removing coverings.
 2. Material and Finish: Antimicrobial, molded plastic, white.

2.4 UTILITY ACCESSORIES

- A. Manufacturers:
 - 1. American Specialties, Inc. (ASI).
 - 2. Bobrick Washroom Equipment, Inc.
- B. Mop and Broom Holder: 22 gauge thick stainless steel with satin finish, Type 304, hat-shaped channel.
 - 1. Holders: 3 spring-loaded rubber cam holders.
 - 2. Length: 24 inches
 - 3. Product: B-223 x 24. Basis of Design
 - 4. Location: As indicated on drawings.

2.5 MATERIALS

- A. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, 0.031-inch- minimum nominal thickness unless otherwise indicated.
- B. Steel Sheet: ASTM A1008/A1008M, Designation CS (cold rolled, commercial steel), 0.036-inch- minimum nominal thickness.
- C. Galvanized-Steel Sheet: ASTM A653/A653M, with G60 hot-dip zinc coating.
- D. Galvanized-Steel Mounting Devices: ASTM A153/A153M, hot-dip galvanized after fabrication.
- E. Fasteners: Screws, bolts, and other devices of same material as accessory unit, unless otherwise recommended by manufacturer or specified in this Section, and tamper and theft resistant where exposed, and of stainless or galvanized steel where concealed.

2.6 FABRICATION

- A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.
- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories in accordance with manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
 - 1. Remove temporary labels and protective coatings.
- B. Grab Bars: Install to comply with specified structural-performance requirements.

3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Clean and polish exposed surfaces in accordance with manufacturer's written instructions.

END OF SECTION

**SECTION 10 4416
FIRE EXTINGUISHERS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire Extinguishers.
- B. Fire Extinguisher Cabinet.
- C. Accessories.

1.02 PERFORMANCE REQUIREMENTS

- A. Conform to NFPA 10.
- B. Provide extinguishers and cabinets classified and labeled by Underwriters Laboratories Inc. for the purpose specified and indicated.

1.03 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Product Data: Provide extinguisher operational features and color and finish.

1.04 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For fire extinguishers to include in maintenance manuals.

1.05 COORDINATION

- A. Coordinate type and capacity of fire extinguishers with fire-protection cabinets to ensure fit and function.

1.06 FIELD CONDITIONS

- A. Install extinguishers after building is conditioned and maintained from freezing.

1.07 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure of hydrostatic test according to NFPA 10 when testing interval required by NFPA 10 is within the warranty period.
 - b. Faulty operation of valves or release levers.
 - 2. Warranty Period: Six years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."

2.02 MANUFACTURERS

- A. Fire Extinguisher and Accessories:
 - 1. Safety One Industries
 - 2. Activar Construction Products Group: www.activarcpg.com
 - 3. JL Industries, Inc: www.jlindustries.com.
 - 4. Larsen's Manufacturing Co: www.larsensmfg.com.
 - 5. Nystrom, Inc: www.nystrom.com
 - 6. Potter-Roemer: www.potterroemer.com.
 - 7. Pyro-Chem, a Tyco Business: www.pyrochem.com.

2.03 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.

1. Provide extinguishers labeled by UL (DIR) or FM (AG) for purpose specified and as indicated.
- B. Dry Chemical Type Fire Extinguishers: Cast steel tank, with pressure gage.
 1. Class A,B,C.
 2. Size 10. Unless otherwise indicated.
 3. Finish: Baked enamel, red color.

2.04 FIRE EXTINGUISHER CABINETS

- A. Cabinet Configuration (FEC Locations):
 1. Safety One Industries: HDOC-10-SS Stainless Steel Heavy Duty Outdoor Series Surface Mounted 10 lb. Fire Extinguisher Cabinet with Full Metal Door (Non-Rated)
 2. Series: Heavy Duty Outdoor
 3. Accommodates Extinguisher Size: 10 lb
 4. Interior Tub Size: 11.5"W x 24"H x 7.75"D
 5. Overall Dimensions: 12"W x 25
 6. Finish: Full Stainless Steel
 7. Handle: Stainless Steel
 8. Lock: Safety Lock
 9. Lettering: Decals; white "Fire Extinguisher" and red "Pull Firmly to Open"

PART 3 EXECUTION

1.01 EXAMINATION

- A. Examine fire extinguishers for proper charging and tagging.
 1. Remove and replace damaged, defective, or undercharged fire extinguishers.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

1.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Refer drawings for locations and mounting height. Verify with Owner prior to install or construction rough opening and surround.
- C. Secure rigidly in place.
- D. Place extinguishers in cabinets prior to substantial completion review inspection by the AHJ. Just prior to visit, inspect and change any out-of-date extinguishers. All extinguishers shall bear inspection tag.

1.03 SCHEDULES

- A. Refer drawings for locations.

END OF SECTION

**SECTION 31 1000
SITE CLEARING**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Removing existing vegetation.
 - 2. Clearing and grubbing.
 - 3. Stripping and stockpiling topsoil.
 - 4. Removing above- and below-grade site improvements.
 - 5. Demolition, removal, and abandonment of existing private utilities.
 - 6. Temporary erosion- and sedimentation-control measures.
- B. Related Sections:
 - 1. Section 31 2000: Earth Moving.

1.3 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile and typified by the lack of organic matter and soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
- B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by Owner.
- C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on-site or at Owner-specified location. Use of salvaged items in completing the scope of work shall be subject to Engineer's review and approval of the condition of said items prior to installation.
- D. Utility Locator Service: Notify OKIE (811 or 1-800-522-6543) for area where Project is located before site clearing.
- E. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.
- F. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 31 2000 "Earth Moving."
 - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction. Contractor is responsible for reestablishing survey control points (at Contractor's expense) if survey control points are disturbed.
- B. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to Construction Drawings, Storm Water Pollution Prevention Plan and the AHJ.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- E. Contractor shall obtain City and State required Earth Change permits.

3.3 EXISTING PRIVATE UTILITIES

- A. Active Services:
 - 1. Prior to performing work, contact service provider and identify/locate any utilities to be protected/preserved in order to maintain service to active facilities. Noted shall be protected/preserved for duration of contract or until such time service from new utilities can be established.
 - 2. Coordinate sealing, capping and/or disconnection of any portions of utility systems to be preserved from portions of the system to be either removed or abandoned. Said work shall be completed by service provider or, in the case of private utilities, by the Contractor.
 - 3. Coordinate any interruptions in service from the above activities with Owner. Contractor shall provide a minimum of 48-hours' notice to Owner prior to anticipated interruption. Do not proceed with interruption in service without documented permission from Owner.

- B. Demolition and Removal:
1. Confirm with Service Provider that portions of utilities to be removed have been disconnected, purged and/or de-energized.
 2. Extents (Plan): Demolish and remove utilities that are within 10-ft of footprint indicated for new construction
 3. Extents (Elevation): Demolish and remove utilities that are within 36-in vertically of the lowest elevation of any overlying excavations required in conjunction with the scope of the project.
 4. Fill any resulting voids and/or excavations with satisfactory soil materials according to backfill requirements in Section 31 2000.
 5. Additional Requirements:
 - a. Piping: Disconnect piping at unions, flanges, valves or fittings.
 - b. Wiring Ducts: Disassemble into unit lengths and remove plug-in and disconnecting devices.
 - c. Overhead Utilities: Communication and electrical facilities mounted to overhead poles shall be removed by the Service Provider. Contractor responsibilities shall include:
 - 1) Requesting and scheduling the removal of overhead facilities with each service provider as required.
 - d. Electrical Transformers shall be protected during construction as the existing transformers will remain at both site locations.
- C. Abandonment:
1. Confirm with Service Provider that portions of utilities to be abandoned have been disconnected, purged and/or de-energized.
 2. Extents (Plan): Abandon utilities that are more than 10-ft outside of footprint indicated for new construction.
 3. Additional Requirements:
 - a. Overhead Utilities: Contractor responsible for the removal of any abandoned poles. Poles shall be demolished and removed in their entirety.
 - b. Sanitary and Storm Sewer Collection Systems:
 - 1) Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough withstand hydrostatic and earth pressures that may results after ends of abandoned piping have been closed. Use with procedure below:
 - a) Close open ends of piping with at least 8-inch thick, brick masonry bulkheads.
 - 2) Abandoned Structures: Excavate around structure as required and use either procedure below:
 - a) Remove structure in its entirety and close open ends of remaining piping.
 - b) Remove top of manhole down to at least 36-inches below lowest below existing grade. Backfill with Satisfactory Soil Material to existing grade per Section 31 2000. Concrete rubble resulting from structure demolition shall not be removed from site and shall not be utilized as fill material.
 - c. Water and Gas Distribution Systems:
 - 1) Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:
 - a) Close open ends of piping with at least 8-inch thick, brick masonry bulkheads.
 - b) Close open ends of piping with threaded metal caps, plastic plugs or other acceptable methods suitable for size and type of material being closed. Do not use wood plugs.

- 2) Valves and other appurtenances shall be demolished and removed in their entirety.

3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 2. Grind down stumps and remove roots, obstructions, and debris to a depth of 36 inches below exposed subgrade.
 3. Use only hand methods for grubbing within protection zones.
 4. Chip removed tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 1. Place fill material per requirements of Geotechnical Report.

3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to a depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.
 1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
 1. Limit height of topsoil stockpiles to 72 inches.
 2. Do not stockpile topsoil within protection zones.
 3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
 4. Stockpile surplus topsoil to allow for respreading deeper topsoil.
- D. Contractor responsible for watering disturbed areas as required to reduce and/or eliminate dust generated from construction activities.

3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.
- C. Items identified to remain property of the Owner shall be stored on-site.

END OF SECTION

**SECTION 31 2000
EARTH MOVING**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Preparing subgrades for slabs-on-grade, walks and pavements.
 - 2. Excavating and backfilling trenches for utilities and pits for buried utility structures.
 - 3. Excavating and backfilling for buildings and structures.

1.3 RELATED SECTIONS

- 1. Section 31 1000: Site Clearing.

1.4 REFERENCED STANDARDS

- A. Latest version or edition shall apply unless otherwise noted.
 - 1. American Society of Testing and Materials (ASTM) International
 - a. C33, Standard Specification for Concrete Aggregates.
 - b. C94, Standard Specification for Ready-Mixed Concrete.
 - c. C150, Standard Specification for Portland Cement.
 - d. C260, Standard Specification for Air-Entraining Admixtures for Concrete.
 - e. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Poozzolan for Use in Concrete.
 - f. C869, Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete.
 - g. D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft³ (600kN-m/m³)).
 - h. D2487, Standard Practice for Classification of Soils for Engineering Purposed (Unified Soil Classification System).
 - i. D2922, Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - j. D3740, Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
 - k. D4318, Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
 - l. D6913, Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis.
 - m. E329, Standard Specification for Agencies Engaged in Construction Inspection, Testing or Special Inspection.

1.5 DEFINITIONS

- A. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- B. CLSM: Controlled Low Strength Material.
- C. Drainage Aggregate: Aggregate material used in construction of sub-drainage features.
- D. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation

and replacement material will be paid for according to Contract provisions for changes in the Work.

- E. Fill: Soil materials used to raise existing grades.
- F. SWPPP: Storm Water Pollution Prevention Plan.
- G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- H. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- I. Treated Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below base course or topsoil materials.
- J. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.6 INFORMATIONAL SUBMITTALS

- A. Material Test Reports: Contractor shall coordinate and request the following reports from the Geotechnical Testing Agency for each type of soil encountered on-site and soil material proposed for fill and backfill:
 - 1. Classification according to ASTM D2487.
 - 2. Laboratory compaction curve according to ASTM D698.
 - 3. Liquid Limit.
 - 4. Plastic Limit according to ASTM D4318.
 - 5. Sieve Analyses according to ASTM D6913.
- B. Field Quality Control Inspection and Test Reports.

1.7 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E329 and ASTM D3740 for testing indicated.

1.8 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by Owner.
- C. Utility Locator Service: Notify Oklahoma One Call System (1-800-522-6543) before beginning earth moving operations.
- D. Do not commence earth moving operations until temporary tree and plant measures, temporary erosion and sedimentation control measures specified in Section 31 1000 "Site Clearing" are in place.
- E. Geotechnical Report: Read and review the Geotechnical Report for an analysis of existing soil conditions and engineering recommendations.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: Free of organic or other deleterious material, maximum particle size less than 3-inches.
 - 1. Liquid Limit less than 35.
 - 2. Plasticity Index less than 10.
- C. Unsatisfactory Soils: Soils containing rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation and other deleterious matter. Unsatisfactory soils also include satisfactory soils not meeting the following requirements.
 - 1. Fill Placement: 95% maximum dry density per Standard Proctor (ASTM D-698), placement moisture content within $\pm 2\%$ of optimum value.
- D. Aggregate Base:
 - 1. Materials Covered: These Specifications cover the aggregate for use in the construction of aggregate base courses, backfill and surfacing.
 - 2. General Requirements: Aggregate material shall be provided and placed in accordance with Oklahoma Department of Transportation 2009 Standard Specifications for Highway Construction - Section 303.
- E. Sand: Fine aggregate per ASTM C33. Fine aggregate material shall be provided in accordance with Oklahoma Department of Transportation 2009 Standard Specifications for Highway Construction - Section 701.05.
- F. Drainage Aggregate: Narrowly graded mixture of washed crushed stone or crushed or uncrushed gravel. Gradation of material subject to associated drainage conduit perforation schedule.

2.2 ACCESSORIES

- A. CLSM: Self-compacting, flowable concrete material produced from the following:
 - 1. Portland Cement: ASTM C150, Type I.
 - 2. Fly Ash: ASTM C618, Class C or F.
 - 3. Normal-Weight Aggregate: ASTM C33, 3/8-inch nominal maximum aggregate size.
 - 4. Foaming Agent: ASTM C869.
 - 5. Water: ASTM C94/C94M.
 - 6. Air-Entraining Admixture: ASTM C260.
- B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
 - 1. Red: Electric.
 - 2. Yellow: Gas, oil, steam, and dangerous materials.
 - 3. Orange: Telephone and other communications.
 - 4. Blue: Water systems.
 - 5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches outside of concrete forms other than at footings.
 - b. 12 inches outside of concrete forms at footings.
 - c. 6 inches outside of minimum required dimensions of concrete cast against grade.
 - d. 6 inches beneath bottom of concrete slabs-on-grade.

3.4 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
 - 2. Contractor shall over-excavate beneath limits of proposed slab, as required. See Geotechnical Report for additional guidance regarding the limits of this over-excavation.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.6 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.

- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

3.7 SUBGRADE INSPECTION

- A. Notify Architect when excavations have reached required subgrade.
- B. In the presence of the Geotechnical Testing Agency, proofroll subgrade with a tandem-axle dump truck weighing at least 25 tones to locate any soft or unstable zones. The proofrolling should involve overlapping passes in mutually perpendicular directions.
 - 1. Where rutting or pumping is observed during proofrolling, the unstable soils should be overexcavated and replaced with an approved satisfactory soil material.
- C. If Geotechnical Testing Agency determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in work.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.8 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Architect.
 - 1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Engineer.

3.9 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.11 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers per requirement of the Geotechnical Report.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.12 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction per requirements of Geotechnical Report.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
- B. Maintain moisture up until the placement of concrete in structural areas.

3.13 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers per requirements of Geotechnical Report.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials per requirements of Geotechnical Report.

3.14 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Turf or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus ½ inch.
 - 3. Pavements: Plus or minus ½ inch.
- C. Grading inside Building Lines: Finish subgrade to a tolerance of ½ inch when tested with a 10-foot straightedge.

3.15 VEHICULAR PAVEMENTS

- A. Perform work only on subgrades free of mud, frost, snow or ice.
- B. Shape and compact subgrade to elevations and grades specified in the Construction Drawings. Appropriate subgrade elevation shall be a function of the paving recommendations documented in the Geotechnical Report and the paving material selected by the Owner.
- C. Treated Subgrade has been specified as part of the proposed paving section by the Geotechnical Engineer. Contractor shall scarify and amend compacted subgrade with specified material as required.
 - 1. Amendment rates specified in Geotechnical Report are an estimate. Contractor shall engage the Geotechnical Testing Agency to complete necessary testing prior to the start of amendment activities as required to confirm estimated amendment rates specified in the Geotechnical Report.
- D. Compact Stabilized Subgrade to required elevations and grades indicated by Construction Drawings. Final thickness of Stabilized Subgrade and Aggregate Base shall be greater than or equal to that specified in Geotechnical Report.

3.16 CONCRETE WALKS

- A. Place drainage course on subgrades free of mud, frost, snow, or ice.
- B. Place sand course under walks as follows:
 - 1. Shape sand course to required crown elevations and cross-slope grades.
 - 2. Place sand course 6 inches or less in compacted thickness in a single layer.
 - 3. Place sand course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.

- C. Compact sand course at optimum moisture content to required grades, lines, cross sections and thickness indicated on plans.

3.17 FIELD QUALITY CONTROL

- A. Special Inspections: Contractor shall engage Geotechnical Testing Agency to perform all Special Inspections related to soils inspections, excavation and compaction required by Code.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies unless more frequent tests are required in the geotechnical report:
 - 1. Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2,500 sq. ft. of building slab, but in no case fewer than three tests and no fewer than two tests per lift.
 - 2. Paved Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2,500 sq. ft. of paved area, but in no case fewer than three tests and no fewer than two tests per lift.
 - 3. Foundation/Retaining Wall Backfill: At each compacted backfill layer, at least one test for every 100 feet of wall length, but no fewer than two tests.
 - 4. Utility Backfill: At each compacted backfill layer, at least one test for every 100 feet of trench length, but no fewer than two tests.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.18 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.19 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 31 3116
TERMITE CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Chemical soil treatment.

1.02 REFERENCE STANDARDS

- A. Title 7, United States Code, 136 through 136y - Federal Insecticide, Fungicide and Rodenticide Act; 1947 (Revised 2001).

1.03 SUBMITTALS

- A. See Section 01 3000 - ADMINISTRATIVE REQUIREMENTS, for submittal procedures.
- B. Product Data: Indicate toxicants to be used, composition by percentage, dilution schedule, intended application rate.
- C. Record moisture content of soil before application.
- D. Warranty: Submit warranty and ensure that forms have been completed in Tecumseh School District I-92's name.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing this type of work and:
 - 1. Having minimum of 2 years documented experience.
 - 2. Approved by manufacturer of treatment materials.
 - 3. Licensed in Tecumseh, Oklahoma.

1.05 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year installer's warranty against damage to building caused by termites.
 - 1. Include coverage for repairs to building and to contents damaged due to building damage. Repair damage and, if required, re-treat.
 - 2. Inspect annually and report in writing to Tecumseh School District I-92. Provide inspection service for two years from Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Manufacturers:
 - 1. Bayer Environmental Science Corp : www.backedbybayer.com/pest-management.
 - 2. FMC Professional Solutions : www.fmcprosolutions.com.
 - 3. Syngenta Professional Products : www.syngentaprofessionalproducts.com.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Toxicant Chemical: EPA and Local authority approved; synthetically color dyed to permit visual identification of treated soil.
- C. Diluent: Recommended by toxicant manufacturer.

2.02 MIXES

- A. Mix toxicant to manufacturer's instructions.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that soil surfaces are unfrozen, sufficiently dry to absorb toxicant, and ready to receive treatment.

3.02 APPLICATION

- A. Comply with requirements of U.S. EPA and applicable state and local codes.

- B. Spray apply toxicant in accordance with manufacturer's instructions.
- C. Apply toxicant at following locations:
 - 1. Under Slabs-on-Grade.
 - 2. At Both Sides of Foundation Surface.
 - 3. Soil Within 10 feet (3 m) of Building Perimeter For a Depth of 2 feet.
- D. Under slabs, apply toxicant immediately prior to installation of subslab gravel and vapor barrier.
- E. At foundation walls, apply toxicant immediately prior to finish grading work outside foundations.
- F. Apply extra treatment to structure penetration surfaces such as pipe or ducts, and soil penetrations such as grounding rods or posts.
- G. Re-treat disturbed treated soil with same toxicant as original treatment.
- H. If inspection or testing identifies the presence of termites, re-treat soil and re-test.

3.03 PROTECTION

- A. Do not permit soil grading over treated work.

END OF SECTION