

Project Manual and
Specifications for

Interior Improvements for:

MSSU

TAYLOR PERFORMING ARTS CENTER

Level 1 Restrooms



**MISSOURI
SOUTHERN**
STATE UNIVERSITY®

100% Construction Documents

March 9, 2026



MO CA #000531

Corner Greer & Associates, Inc.

716 S. Main Street Joplin, MO 64801 o.417.206.3134 www.cornergreer.com

TABLE OF CONTENTS

DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS

Section 001100	Advertisement for Bids
Section 002113	Instructions to Bidders
Section 004200	Bid Form & Affidavits
Section 004300	MSSU – Contract Requirements
Section 005200	Owner Contractor Agreement
Section 006113	Bonds
Section 006275	Lien Waiver
Section 006990	Sales Tax Agreement
Section 007200	General Conditions
Section 007300	Supplementary Conditions
Section 007346	Prevailing Wage Schedule
Section 007347	MO Wage Order #32

DIVISION 01 – GENERAL REQUIREMENTS

Section 010000	General Requirements
Section 011100	Summary of Work
Section 012500	Substitution Procedures
Section 012500A	Substitution Request Form
Section 012500B	Statement of Conformance
Section 012600	Contract Modification Procedures
Section 012900	Payment Procedures
Section 013200	Construction Progress Documentation
Section 013300	Submittal Procedures
Section 014000	Quality Requirements
Section 015000	Temporary Facilities and Control
Section 017300	Execution
Section 017329	Cutting and Patching
Section 017419	Construction Waste Management & Disposal
Section 017700	Closeout Procedures
Section 017839	Project Record Documents

DIVISION 09 – FINISHES

Section 092900	Gypsum Board
Section 095113	Acoustical Panel Ceilings
Section 099123	Interior Painting

DIVISION 10 – SPECIALTIES

Section 102113	Toilet Compartments
Section 102813	Toilet Accessories

END OF TABLE OF CONTENTS

SECTION 001100 – ADVERTISEMENT FOR BIDS

Sealed proposals will be received by MSSU, hereinafter called the "Owner", until 1:00 p.m. on Tuesday, March 31st, 2026 at which time said bids will be collected and opened publicly at MSSU, Billingsly Student Center, Room 356, for furnishing all labor and materials for the construction/improvements of the Taylor Performing Arts Center (TPAC) Level 1 Restrooms.

Bids received more than ninety-six (96) hours, excluding Saturdays, Sundays and holidays, before the time set for opening of bids, as well as bids received after the time set for opening of bids, will not be considered and will be returned unopened.

A **mandatory** pre-bid meeting will be held at 1:00 p.m. on Tuesday, March 17th, 2026. Bidders shall meet at the project location, Taylor Performing Arts Center – Level 1 Lobby, 3950 Newman Road, Joplin, MO 64801.

Plans and specifications may be obtained online from a link furnished by the MSSU (request: Jennings-K@mssu.edu). Successful bidder shall be responsible for purchasing and/or furnishing all plans, specifications and required documents for construction of the project.

A character and amount of security to be furnished by such bidder is stated below:

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.

The Owner reserves the right to reject any or all proposals or to waive any informality or technicality in any proposal.

Requests for Information & Substitution Requests shall be received prior to 1:00pm on Tuesday, March 24th, 2026.

SECTION 002113 - INSTRUCTIONS TO BIDDERS

1. ADDENDA AND INTERPRETATIONS.

1.1 No interpretation of the meaning of the Drawings, Specifications or other documents will be made orally prior to execution of the Contract. No interpretation of the meaning of anything pertaining to a Change Order will be made orally prior to execution of the Change Order.

1.2 Every request for interpretation shall be addressed to the Architect. Interpretations and supplemental instructions will be in the form of written addenda to the Drawings and Specifications and will be delivered or mailed to the Contractor. Addenda so issued shall become part of the contract documents.

2. RECEIPT AND OPENING OF BIDS.

2.1 Bids will be received at a time and date to be announced by the Owner.

2.2 The Owner may consider informal any bid not prepared and submitted in accordance with provisions hereof and may waive any informalities and reject any and all bids. Bids may be withdrawn prior to the scheduled time for opening of bids or authorized postponement thereof. Any bid received after time and date specified will not be considered and will be returned unopened. No Bidder may withdraw a bid within 30 days after actual date of the opening thereof.

3. PREPARATION OF BID.

3.1 Bids must be submitted on forms provided and must be submitted in a sealed envelope bearing on the outside the name of the Bidder and the name of the project for which the bid is submitted. If forwarded by mail, the envelope containing the bid must be enclosed in another envelope addressed to the Owner. All blank spaces in the form shall be fully filled; numbers shall be stated both in writing and in figures. Written bid amounts shall govern. The signature shall be in long hand; and the completed form shall be without interlineations, alterations or erasures.

3.2 Proposals shall not contain any recapitulation of work to be done. No oral, telegraphic, or telephonic proposals or modifications will be considered.

4. LAWS AND REGULATIONS.

4.1 The Contractor's attention is directed to the fact that all applicable ADA (Handicap) CODES, State laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction 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.

5. OBLIGATION OF BIDDER.

5.1 At the time of opening of bids each Bidder will be presumed to have inspected the site and means of access and transportation required and to have read and to be thoroughly familiar with the Drawings, Specifications, bidding documents and contract documents, including all Addenda. The failure of any Bidder to examine any form, instrument or document or to inform himself of conditions relating to the construction of the project shall in no way relieve any Bidder from any obligation in respect to his bid.

5.2 Should a bidder find discrepancies in, or omissions from the drawings, or documents, or should he be in doubt as to their meaning, he should at once notify the Architect, who will send a written instruction to all bidders. Neither the Owner nor Architect will be responsible for any oral instructions.

6. PERFORMANCE, STATUTORY AND DEFECT BOND: Successful bidder shall be required to furnish surety bonds in the principal sum of the contract, payable to the Owner and executed by a Surety Company authorized to do business in the State of Missouri, as surety; said bonds shall be subject to approval by the Owner.

7. IDENTIFICATION NUMBERS: All contractors, prime and general, sub-contractors, independent contractors and any person engaged in contract labor must possess current identification numbers issued by the Missouri Department of Revenue, Missouri Employment Security Commission, Internal Revenue Service and Social Security Administration.

8. BIDDER'S QUALIFICATIONS:

8.1 This project is to be bid by qualified Contractors familiar with the type of construction required by this project. The General Contractor shall submit with his proposal for approval a list of all Subcontractors proposed for performing work on this project.

8.2 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 the obligations of the Agreement and to complete the WORK contemplated therein. Low bidder, if requested, must submit a financial statement, experience record, and an equipment schedule. Financial statement must reflect true financial condition of bidder within three months prior to date of bid opening.

9. WITHDRAWAL OF BIDS. No bids may be withdrawn after the scheduled closing time for receipt of bids for at least thirty (30) days.

10. CONTRACT EXECUTION. Upon award of contract the Contractor shall be required to execute the contract and the surety bonds within ten (10) days thereafter. The competency and responsibility of bidders and of their proposed sub-contractors will be considered in making the award. The Owner does not obligate himself to accept the lowest or any other bid.

11. POWER OF ATTORNEY: Attorneys-in-fact who sign bonds must file with each bond a certified and effectively dated copy of their power of attorney.

12. FORM OF CONTRACT: The Contract will be per 005200, or otherwise as directed by Owner (MSSU).

13. COMMENCEMENT AND TIME OF COMPLETION OF CONSTRUCTION: Contractor shall be mobilized and "on site" within twenty (20) calendar days of "Notice To Proceed". The time of completion of construction of the Project shall be as specified by the Proposal and Contract Agreement. The Bidder may not take exception to the time allowed to complete the work. Bids shall reflect the Bidder's price for providing all necessary labor, material, equipment, and supervision to fully complete the work from the date specified in the Notice to Proceed.

14. SALES TAX: It is the policy of the Owner to take advantage of any savings from their "Tax Exempt" Status. To this end the Contractor agrees to process proper and adequate paperwork and documentation under the governing laws of the State of Missouri. The Owner will furnish the successful bidder an appropriate exemption certificate. The Contractor shall not include such TAXES in his "Proposal."

15. SCOPE OF PROJECT: The project consists of the construction of the Level 1 Restroom interior improvements at Taylor Performing Arts Center (TPAC) at MSSU.

16. Each proposal on bid form includes a BASE BID AMOUNT, with any alternates and unit costs which represents a summary of all costs.

17. PLANS & SPECIFICATIONS:

- 17.1 Plans and specifications may be obtained online from a link furnished by the Owner (MSSU). Successful bidder shall be responsible for purchasing and/or furnishing all plans, specifications and required documents for construction of the project.

18. ANTI-DISCRIMINATION AGAINST ISRAEL ACT: All contractors, subcontractors, manufacturers and material suppliers shall agree to comply with Missouri's Discrimination Against Israel Statute. Accordingly, all contractors, subcontractors, manufacturers and material suppliers will not engage, during the terms of this Agreement, in a boycott of Israeli goods or services, either directly or indirectly. Failure to comply will result in forfeiture of contract.

END OF SECTION 002113

BID FORM

Date _____

Time: _____

Place _____

PROPOSAL OF

_____ (hereinafter called "Bidder")

_____ and
(insert Corporation, Partnership, or Individual, as applicable)

existing under the laws of the State of _____, doing business as

TO: Missouri Southern State University
(hereinafter called "Owner")

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

**MSSU – Taylor Performing Arts Center (TPAC)
Level 1 Restrooms
3950 E. Newman Road
Joplin, MO 64801**

having carefully examined the plans and specifications with related documents and the site of the proposed work, and being familiar with the premises and the condition affecting the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all materials, supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. The prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

Bidder hereby agrees to commence Work under this Contract on or before a date to be specified in a written "Notice to Proceed" by the Owner and to fully complete the project within _____ calendar days thereafter as stipulated in the specifications.

Bidder acknowledges receipt of the following addendum: _____

BASE PROPOSAL: Bidder agrees to perform all of the work described in the specifications and as shown on the plans, for the following prices:

TOTAL BASE BID AMOUNT:

_____ DOLLARS (\$ _____)

(Amounts are to be shown in both words and figures. In case of discrepancy, the amounts shown in words will govern.)

Bidder understands and acknowledges that the bid items shown in this Proposal represent a summary of all major components of construction required, and is set forth to facilitate the comparison of bids, and to provide a basis for any future negotiations that may be necessary. The bid price for each item shall include the cost of all adjacent or related items which are shown on the plans, or called for in the specifications, or otherwise necessary to provide a complete and functioning system.

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

The Bidder agrees that the Owner may reduce the quantities of work required, in order to bring the total contract costs within the available funds.

The Bidder agrees that his bid shall be good and may not be withdrawn for period of thirty (30) calendar days after the scheduled closing time for receiving bids.

The bid guaranty furnished herewith by (Certified Check) (Cashier's Check) or (Bid Bond) in the amount of:

_____ DOLLARS(\$ _____)
which is equal to five percent (5%) of the largest total of lump sum bid price, which I understand is to become the property of the Owner in the event the Contract and bond are not executed within the time above set forth, as liquidated damages, for the delay and additional expense to the Owner caused thereby.

The Bidder agrees, if awarded the Contract, to complete the Project within the number of days which is set forth in this Proposal. The Bidder further agrees to commence construction no later than 20 days from date of receiving Notice to Proceed.

Upon receipt of written notice of the acceptance of this bid, Bidder shall execute the formal contract attached within ten (10) days and deliver a surety bond, or bonds, as required and set forth in the GENERAL CONDITIONS.

ATTEST Respectfully submitted,

By _____
Bidder

Title _____
Title

By _____

(Seal)
(If Bid by a Corporation)

Street Address

City, State

BUSINESS RELATIONSHIPS AFFIDAVIT

STATE OF _____)
) ss..
COUNTY OF _____)

_____, of lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by the Bidder to submit the attached bid. Affiant 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)

Subscribed and sworn to before me this _____ day of _____, 202__

Notary Public

My Commission Expires:

NON-KICKBACK AFFIDAVIT

STATE OF _____)
) ss..
COUNTY OF _____)

The undersigned person, of lawful age, being first duly sworn, on oath says that the attached invoice is true and correct and that (s)he is authorized to submit the invoice pursuant to a contract or purchase order. Affiant further states that the work, services, or materials as shown by this invoice have been completed or supplied in accordance with the plans, specifications, orders, requests or contract furnished or executed by the affiant. Affiant further states that (s)he has made no payment directly or indirectly to any elected official, officer or employee of the county, municipality, or school district of money or any other thing of value to obtain payment of the invoice or procure the contract or purchase order pursuant to which an invoice is submitted.

Contractor, Supplier, Engineer, Architect

Subscribed and sworn to before me this _____ day of _____, 202__

Notary Public

My Commission Expires:

Contract Requirements:

Your attention is called to the following requirements and the State of Missouri – Division of Purchasing and Materials Management, Terms and Conditions – Request for Proposal:

Federal Work Authorization Program: RSMo. 285.525 and 285.530 require business entities to enroll and participate in a federal work authorization program in order to be eligible to receive an award by the state or any political subdivision of any contract in excess of \$5,000. Bidders must submit with their bid an Affidavit of Enrollment in Federal Work Authorization Program and Compliance with Executive Order #07-13.

Revenue. No contract will be awarded by the University unless the successful bidder certifies that he/she has complied with all applicable provisions of Section 285.230-234.

Sales Tax Exempt. The University is exempt from payment of State of Missouri and City sales taxes on all materials used on behalf of the University for this project.

Preferences: Please note the following preferences: Buy American (RSMo 34.353), Buy Missouri (RSMo 34.070), Reciprocity (34.076 RSMo), and Missouri Service Disabled Veteran Business (34.375 RSMo).

University Right to Reject: The University reserves the right to reject any or all proposals, to waive irregularities, and to award the work to any bidder. All bidders agree that such rejection shall be without liability on the part of the University or its employees for any damage or claim brought by any bidder because of such rejection, nor shall any bidder seek any recourse of any kind because of such rejection. Each bidder is solely responsible for all costs and expenses in preparing its bid or participating in the bidding process, in submitting any information to the University and in responding to any request for additional information or participating in interviews. The submission of a proposal in response to this constitutes an agreement of the bidder to these conditions.

No bid shall be considered binding upon the University until the written contract has been properly executed and the following documentation/evidence has been furnished by bidder: (i) a satisfactory performance and payment bond, (ii) proof of insurance coverage of the type and limits required by the contract, (iii) appropriate affirmative action plan submitted or, if applicable, the Affidavit for Waiver of Affirmative Action, and (iv) if applicable, proof that the bidder has complied with RSMo Section 285.230-234. Failure to execute and return the contract and associated documents within the prescribed period of time shall be treated, at the option of the University, as a breach of bidder's obligation and the University shall be under no obligation to bidder.

Kristy Jennings
Finance Accountant

Authorized to Do Business: If Contractor is a corporation or limited liability company organized in the State of Missouri, Contractor represents that it is in Good Standing with the Missouri Secretary of State. If Contractor is a corporation or limited liability company organized in a state other than Missouri, Contractor represents that it is authorized to do business in the State of Missouri.

SECTION 005200 – OWNER CONTRACTOR AGREEMENT

If notified of the acceptance of Bid within 30 calendar days of the time set for opening of bids, the Contractor agrees to execute the A.I.A. Document A101 – 2017, Standard Agreement between Owner and Contractor within 10 calendar days of the receipt of such notification and in accordance with the Bid and the Contract Documents.

A sample document may be reviewed at the Architect's Office for reference only. The final wording and dates will be completed by the Architect Contractor prior to execution.

END OF DOCUMENT 005200

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENT:

That _____,

As Principal, and _____,
a corporation organized under the law of the State of Missouri, Surety, are held and firmly bound unto
_____ in the penal sum of _____
(State or Other Entity)

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, jointly and severally, firmly by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written Contract with _____,
(State or Other Entity)
dated _____, 2026, for _____

all in compliance with the plans and specifications, therefore, made a part of said Contract and on file in
the office of _____
(Name and address of Agency)

NOW, THEREFORE, if said Principal shall, in all particulars, well, truly, faithfully perform and abide by
said Contract and each and every covenant, condition, and part thereof and shall fulfill all obligations
resting upon said Principal by the terms of said Contract and said specifications; and if said Principal shall
protect and save harmless said _____ from any

(State or Other entity)

pecuniary loss resulting from the breach of any of the items, covenants and conditions of said Contract
resting upon 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 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 so to do, the day and year set forth below.

DATED this _____ day of _____, 2026.

PRINCIPAL:

By _____

ATTEST:

SURETY:

By _____
Attorney-in-Fact

STATUTORY BOND

KNOW ALL MEN BY THESE PRESENT:

That _____, as Principal,
and _____, a corporation organized
under the laws of the State of _____ and authorized to transact business in the
State of Missouri, as Surety, are held and firmly bound unto _____ in
(State or Other Entity)

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, jointly and severally,
firmly by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written Contract with _____,
(State or Other Entity)
dated _____, 2026, for _____

all in compliance with the plans and specifications, therefore, made a part of said Contract and on file in
the office of _____
(Name and address of Agency)

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 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, 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 so to do, the day and year set forth below.

DATED this _____ day of _____, 2026.

PRINCIPAL:

By _____

ATTEST:

SURETY:

By _____
Attorney-in-Fact

DEFECT BOND

KNOW ALL MEN BY THESE PRESENT:

That _____, as Principal, and
_____, a corporation organized under the laws of
the State of _____ and authorized to transact business in the State of Missouri, as Surety,
are held and firmly bound unto _____ in the
(State or Other Entity)
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 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 _____,
(State or Other Entity)
dated _____, 2026, for _____

_____ all in compliance with the plans and specifications, therefore, made a part of said Contract and on file in the office of _____
(Name and address of Agency)

NOW, THEREFORE, if said Principal shall pay or cause to be paid to _____
(State or Other Entity)

all damage, loss, and expense which may result by reason of defective materials and/or workmanship in connection with said work, occurring within a period of one (1) year from and after the acceptance of said project by _____;
(State or Other Entity)

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 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 so to do, the day and year set forth below.

DATED this _____ day of _____, 2026.

PRINCIPAL:

By _____

ATTEST:

SURETY:

By _____
Attorney-in-Fact

**CONDITIONAL RELEASE AND WAIVER OF LIEN
(PERFORMANCE REVIEW)**

Upon receipt and sufficiency of a check from the Missouri Southern State University (MSSU), 3950 E. Newman Road, Joplin MO 64801 consideration of payment being received, Contractor hereby waives, releases, remises, relinquishes and forever discharges MSSU from any and all obligations and liabilities arising out of or related to said materials and the work included there under,

The undersigned Contractor hereby warrants that all material suppliers, sub-contractors, and/or laborers have been paid or will be paid from these funds and that all applicable Federal, State and/or local taxes have been paid or will be paid from these funds. Further, the undersigned hereby indemnifies and holds the property owner harmless of any claim contrary to this warranty.

Contractor Name: _____

Contractor Address: _____

Date: _____

Signed By: _____
(Name and Title)

Subscribed and sworn to before me this _____ day of _____, 2026.

NOTARY PUBLIC

Notary Seal (Must include Number
And Expiration Date)

Return form to: Missouri Southern State University
3950 E. Newman Road
Joplin, MO 64801

SALES TAX AGENCY AGREEMENT

This is an Agency Agreement made and entered into as of the _____ day of _____, 2026, between _____ of _____ COUNTY, MISSOURI, a political subdivision of the State of Missouri (hereinafter referred to as "Owner"), and _____, (hereinafter referred to as "Contractor").

RECITALS:

1. Owner has solicited bids for the interior improvements of restrooms on Level 1 at Taylor Performing Arts Center (TPAC) for Missouri Southern State University (the "Project") in Jasper County, Missouri; and such facilities as are necessary and appropriate for the operation thereof; which Project, on or before completion shall be owned by the Owner.
2. Contractor has been awarded the contract for the construction of the Project.
3. Owner desires to purchase all materials, supplies and equipment for the Project in its own name and to take immediate title to all materials, supplies and equipment, and to have Contractor, as general contractor for the Project, perform portions of such purchasing duties.

NOW THEREFORE, in consideration of the premises and in order to constitute and appoint Contractor as agent of Owner for the purchase of equipment and materials for the Project, IT IS AGREED AS FOLLOWS:

1. Owner, as Principal, hereby constitutes and appoints Contractor as Owner's agent, for it and in its name, to acquire materials and equipment for use in constructing the Project.
2. Title to all materials and equipment purchased by Contractor as agent for Owner will pass directly from the seller thereof to Owner.
3. Contractor acknowledges that it is an agent for Owner and agrees to act as agent for Owner in connection with the acquisition of materials and equipment for the Project in the manner above described.
4. The relationship of principal and agent created by this Agreement shall continue until terminated by either party by notice in writing to the other. The parties hereto agree that all sellers or vendors of materials and equipment for the Project shall be entitled to rely upon the existence of the Agreement until they have received written notice of its revocation.
5. Contractor agrees that it will not purchase any material or equipment pursuant to this Agreement except that authorized and intended for inclusion in the Project.
6. In executing purchase orders for equipment and materials for the Project, Contractor shall include in each purchase order a statement, to be approved as to form by Owner, that Contractor is acting as Owner's agent, individually and without power of redesignation, for the purchase of the equipment and materials covered by the purchase order.

7. All equipment and materials purchased by Contractor under this Agreement shall be delivered to owner at the Project job-site.
8. Only equipment and materials to be incorporated in the Project shall be purchased by Contractor as Owner's agent under this Agreement and no equipment and materials will be purchased except the items required by the plans and specifications for the Project. Contractor will not purchase, as agent hereunder, any equipment or materials to be used only incidentally in connection with the Project. Nothing contained herein shall alter the obligation and responsibility of Contractor under the contract between Owner and Contractor for the construction of the Project.
9. All reimbursement by Owner to Contractor for materials and equipment purchased by Contractor as Owner's agent hereunder shall be deemed to be a part payment on the Project contract price.
10. Contractor shall not be entitled to any compensation for its services as Owner's agent hereunder.

IN WITNESS WHEREOF, the parties have executed this Agency Agreement as of the date first above written.

ATTEST:

OF _____ COUNTY, MISSOURI

Clerk

By _____

(SEAL)

ATTEST:

Contractor

Secretary

By _____

SECTION 007200 - GENERAL CONDITIONS

1. General Conditions shall consist of the American Institute of Architects AIA Document #A-201, 2017 Edition, entitled "General Conditions of the Contract for Construction", and are as much a part of these specifications as if bound herein. A copy of the General Conditions is on file and may be examined in the Architect's office.

END OF SECTION 007200

SECTION 007300 - SUPPLEMENTARY CONDITIONS

1. INSURANCE

1.1 General: The Contractor shall not commence work under this contract until he has obtained all insurance required under this paragraph and such insurance has been approved. The Contractor shall not allow any subcontractor to commence work on this subcontract until all similar insurance required of the subcontractors has been obtained. The minimum insurance coverages listed below shall in no way limit the Contractor from any other obligations or liabilities.

1.2 Certificates of Insurance: The Contractor shall furnish Certificates of Insurance to the Owner and the Architect showing that he carries the following insurance:

<u>Workmen's Compensation</u>	<u>Statutory Limit</u>
Personal Injury Liability	\$ 500,000 for each person injured \$1,000,000 for each accident
Property Damage Liability	\$500,000 for each accident \$1,000,000 Aggregate
Insurance Umbrella	\$2,000,000

Insurance in said amounts shall be maintained throughout the life of the contract. The Contractor's insurance shall include coverage against the hazards of explosion, collapse, and underground damage. Failure to file certificates or acceptance by the Owner of certificates of insurance which do not indicate coverage as specified herein, shall in no way relieve the Contractor of his responsibility for maintaining adequate insurance.

1.3 The Contractor shall obtain and maintain Builder's Risk Insurance coverage to protect the interest of the Owner. The limits of the Builder's Risk policy shall be equal to total contract sum. A certificate evidencing the type and amount of Builder's Risk insurance shall be submitted to the Owner at the time of execution of contract.

1.4 Subcontractor's Insurance: Each subcontractor shall maintain liability insurance same as required to be maintained by the prime Contractor, and the limits of liability shall not be less than those required to be maintained by the prime Contractor, except that the Contractor may elect to permit deviations as follows:

Lesser limits may be maintained by subcontractors if their operations are covered to the specified limits by the insurance maintained by the prime Contractor.

Subcontractors whose work does not involve such hazards are not required to maintain coverage against the hazards of explosion, collapse, and underground damage.

Certificates of such insurance shall be filed with the prime Contractor, but failure to file certificates, or acceptance by the prime Contractor of certificates of insurance which do not indicate coverage as specified herein, shall in no way relieve the subcontractor of his responsibility for maintaining adequate insurance. Requirements of the Prime Agreements shall govern over and mandate required insurance and coverages listed in this section, whether listed or omitted.

NOTE: Nothing in this section shall create any obligation on the part of the Owner or Architect to see that the specified insurance is maintained.

1.5 Automobile Liability Insurance: The Contractor shall take out and maintain during the life of this contract, such Automobile Bodily Injury Liability Insurance with a combined single limit of \$1,000,000 each accident.

1.6 Before commencing any work on this project, the Contractor shall submit in duplicate all insurance policies and Certificates of Insurance to the offices of the Owner and the Architect for examination and approval. Any renewals of these insurance documents, policies, and certificates of insurance shall be submitted to the Owner before the original policies and certificates have expired.

2. SHOP DRAWINGS: The Architect is under no obligation to check on any shop drawings until the completed (not only in number but also in adequacy of information supplied) drawings for that trade are in his hands. The Contractor is to submit the number of copies of drawings required by the parts of the specifications relating to that trade; if no specific number of copies is mentioned in a particular section, then six (6) copies of shop drawings will be required. The Architect may, at his option, require PDF copies of shop drawings for review and record, and, after correcting the information may have the necessary number of prints made and distributed at the expense of the party submitting the shop drawing for approval. After shop drawings have been approved by the Architect, it shall be the duty of the Contractor to see that all subcontractors or materialmen requiring information regarding work to be done or materials to be supplied, that may be affected by said shop drawings shall be supplied with copies of such drawings and given such information as they may require for their guidance.

3. RECORD DRAWINGS: The Contractor shall, during the progress of the work, keep an accurate record of all changes and corrections from the layouts shown on the drawings. Record of changes may be kept by accurately making all changes on a set of prints during the progress of the job. Exact location of all underground utility service entrances and their connections to utility mains, as well as all valves, etc., which will be concealed in the finished work, shall be accurately indicated on the drawings by measured distances. Upon completion of the work and prior to final payment, the Contractor shall furnish to the Architect and the Owner one set of record prints, legibly and accurately marked to indicate all changes, additions, deletions, etc. from the contract drawings.

4. MEASUREMENT: Discrepancies shall be called to the attention of the Architect before work is installed. No work which is to be installed in the building shall be laid out according to figured dimensions when work already installed may govern these dimensions; verify all dimensions at job before laying out shop drawings or shop work. The Contractor will be responsible for any mistakes which may be attributed to failure to follow these instructions. The Architect is not responsible for any discrepancies in figured dimensions.

5. SPECIFICATIONS AND DRAWINGS: In all cases, large scale details shall take precedence over small scale general drawings. In cases where floor elevations are shown, these are to be checked carefully against detailed sections, and the Contractor will be responsible for all heights shown or marked on small scale drawings.

6. LAYING OUT WORK

6.1 A competent foreman or superintendent shall be kept by the Contractor at the building at all times during the progress of the work. He shall receive instructions and act for the Contractor in the accurate laying out and direction of all work.

6.2 The Contractor shall have limited use of the site and shall limit his activities as nearly as possible to areas to receive new work. Contractor shall coordinate all activities, storage areas, and hours for construction with the Owner's Representative.

7. OBSERVATION OF WORK BY THE ARCHITECT

7.1 The Architect and his representative shall at all times have access to the work wherever it is in preparation or progress, and the Contractor shall provide facilities for such access and for building observations.

7.2 Special Test or Approval: If, for any reason, the work requires special tests or approval, the Contractor shall give the Architect timely notice of the work's readiness; and if the observations are by another authority other than the Architect, the Architect shall be notified of the date fixed for such. If any work should be covered up without approval or consent of the Architect, it must, if required by the Architect, be uncovered for examination at the Contractor's expense.

7.3 Re-examination of questioned work may be ordered by the Architect, and if so ordered, the work must be uncovered by the Contractor. If such work be found in accordance with the contract documents, the Owner shall pay the cost of re-examination and replacement. If such work be found not in accordance with the contract documents, the Contractor shall pay such cost.

7.4 Special Observations by the Architect: The Contractor shall notify the Architect when the work reaches the following stages of construction so that special observations of the work may be accomplished prior to the covering up of these items:

7.4.1 Demolition of existing conditions.

7.4.2 All new or re-worked utilities in place and tested, but not covered.

7.4.3 Two weeks prior to substantial completion of Project.

Contractor's notice to Architect shall be at least twenty-four (24) hours prior to the time set for the viewing.

8. TEMPORARY TOILETS: The general construction contractor shall install temporary toilets. Toilets shall be sufficient in number to take care of all workmen. Proper means of waste disposal shall be provided by the Contractor. Sanitary accommodations must conform to health laws and must be used by workmen.

9. WATER: The Owner will furnish and pay for all water for construction purposes.

10. ELECTRIC POWER: The Owner will furnish and pay for temporary electrical power for construction purposes.

11. CHANGE ORDERS: Shall be processed by the Contractor in accordance with the General Conditions.

12. CONTRACT BREAKDOWN: Within one week after receipt of the Notice to Proceed, the Contractor shall submit a construction "BAR GRAPH" for approval and coordination with the Owner.

13. RESPONSIBILITIES OF CONTRACTOR

13.1 The undertaking of periodic site visits and building observations by the Architect shall not be construed as supervision or actual construction nor make him responsible for providing a safe place for the performance of work by Contractors or Contractor's employees or those of suppliers or subcontractors or for access, visits, use, work, travel, or occupancy by any person.

13.2 All construction procedures and equipment used in the construction of these facilities must meet all of the requirements of the local and national standards and codes. The General Contractor shall be responsible for enforcing those standards and codes.

14. TIME FOR COMPLETION

14.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraces shall be commenced on a date specified in the NOTICE TO PROCEED.

14.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15. PAYMENT: The Contractor shall be paid for work complete and properly stored materials on a monthly basis. Only ninety-five percent (95%) of each monthly estimate approved during construction of the project shall be paid by the Owner to the Contractor prior to completion of construction, and the Certificate of Payment shall be for this percentage. Each application for payment shall be made on AIA Document G702 and AIA Document G703. Additionally, with each application, starting with the second application, the Contractor shall submit a notarized Waiver and Release of Lien, in the form attached hereto, from all manufacturers, materialmen, sub-contractors, and others furnishing services and/or materials for the Project.

16. WAIVER AND RELEASE OF LIEN AFFIDAVIT: Prior to Substantial Completion by the CONTRACTOR of the Project, and prior to the receipt of payment of any amount in excess of ninety-five percent (95%) of the total final contract dollar amount, the CONTRACTOR shall obtain and deliver in duplicate to the OWNER, through the Architect, a notarized Waiver and Release of Lien, in the form attached hereto, from all manufacturers, materialmen, subcontractors, and others furnishing services and/or materials for the Project.

These documents shall be accompanied by an Affidavit, signed and notarized by the CONTRACTOR, or his legal Representative, certifying that all persons providing labor have been paid and listing names of all suppliers, material men, subcontractors, and others providing goods and/or services for the Project.

END OF SECTION 007300

SECTION 007346 - PREVAILING WAGE SCHEDULE

This Proposal and Contract shall be based upon the required payments by the Contractor of not less than the prevailing hourly rate of wage for each craft or type of workman required to execute the Contract. See said schedule, Hourly Wage Rates, bound therein and made a part hereof.

The Contractor and subcontractors shall keep an accurate record showing the names and occupations of all workmen employed by him, together with the actual wages paid to each workman, which shall be open to inspection at all reasonable hours by a representative of the Owner.

All prevailing hourly wage rates shall be kept posted in a prominent and easily accessible place at the project site. Such notice shall remain posted during the full time that any workman shall be employed on the projects.

END OF SECTION 007346

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



MIKE KEHOE, Governor

Annual Wage Order No. 32

Section 049
JASPER COUNTY

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

Original Signed by _____

Logan Hobbs, Director
Division of Labor Standards

Filed With Secretary of State: _____ **March 10, 2025**

Last Date Objections May Be Filed: **April 9, 2025**

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	\$34.92
Boilermaker	\$28.82*
Bricklayer-Stone Mason	\$28.82*
Carpenter	\$52.44
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	\$41.31
Plasterer	
Communication Technician	\$28.82*
Electrician (Inside Wireman)	\$50.49
Electrician Outside Lineman	\$28.82*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	\$28.82*
Glazier	\$28.82*
Ironworker	\$28.82*
Laborer	\$40.80
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	\$28.82*
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	\$28.82*
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	\$38.49
Plumber	\$55.58
Pipe Fitter	
Roofer	\$44.74
Sheet Metal Worker	\$52.19
Sprinkler Fitter	\$28.82*
Truck Driver	\$28.82*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in RSMo Section 290.210.

Heavy Construction Rates for
JASPER County

Section 049

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	\$28.82*
Millwright	
Pile Driver	
Electrician (Outside Lineman)	\$28.82*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	\$45.92
General Laborer	
Skilled Laborer	
Operating Engineer	\$64.15
Group I	
Group II	
Group III	
Group IV	
Truck Driver	\$28.82*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

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

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

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

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

OVERTIME and HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, "**overtime work**" shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

SECTION 010000 - GENERAL REQUIREMENTS

1. SCOPE

Provide all items, articles, materials, testing, tools, operations, or methods listed mentioned, scheduled on drawings, and/or herein specified.

2. GENERAL

2.1 General Contractor and all subcontractors shall coordinate with adjacent work and other trades to facilitate general progress or work. Each trade shall afford their trades reasonable opportunity for installation of work and material storage.

2.1.1 Contractor shall contact all “utilities” and Owner’s Representative to verify all utility locations and any buried communication wiring, electrical, gas, sanitary sewer(s), storm sewers, etc.

2.2 Provide, maintain, watertight, heated office when required by Architect. Provide with doors, locks and windows, for use of Contractor, subcontractors, and Architect. Provide with telephone at no cost to the Owner.

2.3 Verify grades, lines, levels, dimensions shown on drawings. Report errors, inconsistencies to Architect before commencing work. Provide and maintain well built batter boards. Establish two widely separated bench marks.

2.4 Furnish, maintain temporary stairs, ladders, ramps, scaffolds, hoist, runways, chutes, etc., required for execution of all trades; conform to state and local laws applicable.

2.5 General Contractor shall protect all of the Owner's buildings, finishes and equipment from damage. Protection devices such as dust curtains, temporary walls, etc., will be erected and installed in accordance with Owner’s requirements. Protection of equipment shall be verified with Owner prior to bidding.

2.6 The General contractor shall furnish and install temporary barricades, fences, signs as required by codes or the Owner to protect any open ditches or hazardous conditions.

2.7 Manufactured articles, material, equipment to be applied, installed, connected, erected, used, cleaned, conditioned as directed by manufacturer

2.8 All work shall comply with all local, state, and national codes and agencies which govern the work to be performed. Unless otherwise stated, or where municipal codes govern, the following codes shall apply:

2.8.1 2018 IBC, as adopted by MSSU.

2.9 The Contractor shall have limited access and storage facilities on Owner’s property. Storage for construction purposes will be in a central, secured area which must be approved by the Owner. Contractor shall assume full responsibility for protection of stored items.

3. SPECIAL CONDITIONS

3.1 The Contractor shall coordinate his construction and use of the site with the Owner prior to start of construction.

3.2 The Owner reserves the right to take possession and use any completed or partially completed portion of the new work regardless of the time of completion of the entire project, providing it does not interfere with the Contractor’s work. Such taking possession or use of the project or part thereof shall not be construed as final acceptance or approval, or any portion thereof, or as acknowledgement of the fulfillment of the terms of the contract. The Owner has purchased or has existing materials and equipment that will be installed by others in the project which this contract for construction includes. The Contractor shall coordinate his work with the Owner and other contractors to facilitate the installation of equipment by Owner.

3.3 The Contractor is required to secure area around construction site. Such barriers shall be used for the purpose of preventing injury to those who are not working on the Construction Project at the site and shall not be removed until authorized by Owner's representative. This requirement shall not limit Contractor from any other safety or protective measures he deems necessary to adequately protect those present at site from injury.

4. SCHEDULES AND REPORTS

4.1 PRE-CONSTRUCTION CONFERENCE: Prior to beginning construction, after the Notice to Proceed has been issued, a meeting will be held at the place and time designated by the Architect for the purpose of discussing:

- 4.1.1 Construction Schedule
- 4.1.2 Critical areas of the work
- 4.1.3 Inspection procedures
- 4.1.4 Coordination of prime Contractors
- 4.1.5 Field Orders and Change Orders
- 4.1.6 Shop drawings
- 4.1.7 Other items as deemed necessary by the Architect or Owner.

4.2 The following people or their authorized representative are required in attendance at the Pre-Construction Conference

- 4.2.1 Owner
- 4.2.2 Architect
- 4.2.3 General Contractor
- 4.2.4 Major Contractors / Subcontractors

4.3 PROGRESS REPORTS: The General Contractor shall submit monthly progress reports to the Architect showing each major item of the work, the current percentage of completion, and whether ahead or behind schedule. Any delays beyond the General Contractor's control, such as weather, strikes, etc., that delay the project's completion, are to be documented and turned in along with this report to the Architect. Orders for all materials must be placed within thirty (30) days after award of the contract, and evidence of such orders furnished to the Architect. These requirements will be considered mandatory prior to any approval of monthly pay request by the Architect.

4.4 TESTS OF MATERIALS:

4.4.1 Furnish materials and equipment that have been properly inspected and tested in accordance with accepted industries standards. Field or laboratory tests where specified herein, the costs of such being paid for by Owner.

4.4.2 Should such tests or visual observation indicate failure of the materials or construction to meet requirements of drawings and/or specifications, Contractor shall make and pay for additional tests, as directed by the Architect, until compliance has been proven, and should such work fail to comply, Contractor shall replace it at his expense.

END OF SECTION 010000

SECTION 011100 - SUMMARY OF WORK

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

PROJECT/WORK IDENTIFICATION

GENERAL: Project name: Level 1 Restroom Interior Improvements for Taylor Performing Arts Center (TPAC) at Missouri Southern State University.

The Work: Interior Improvements at an existing facility. Scope of work includes General Construction, modification to existing MEP systems to accommodate intended design utilizing existing systems, Finishes upgrades.

The work includes providing all labor, materials, equipment, supervision, accessories, appliances, hauling, storage, tools and incidents necessary for the construction and completion of the work according to the Contract Documents.

Contract Documents indicate the work of the Contract and related requirements and conditions that have an impact on the project. Requirements and conditions that are indicated in the Contract Documents include, but are not necessarily limited to, the following:

Existing site conditions and restrictions on use of the site.

Summary by References: Work of the Contract can be summarized by references to the Contract, General Conditions, Supplementary Conditions, Specification Sections, Drawings, addenda, and modifications to the contract documents issued subsequent to the initial printing of the contract documents and including, but not necessarily limited to, printed material referenced by any of these. It is recognized that work of the Contract is also unavoidably affected or influenced by governing regulations and building codes.

PERMITS AND INSPECTIONS

Secure, schedule, coordinate and pay for all permits, licenses and inspections required by codes, ordinances, statutes, administrative regulations, national standards, etc., which bear on the Work. The Contract Documents list certain codes, etc., but such listing is not all inclusive. All contractors must obtain a local business license.

Governing Building Codes and their editions intended to be used for this project are:

AS OUTLINED IN THE PLANS AND/OR SPECIFICATIONS

CONTRACTOR USE OF PREMISES

General: The Contractor shall limit his use of the premises to the work indicated, so as to allow for Owner occupancy and use by the public.

Use of the Site: Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to the site rules and regulations affecting the work while engaged in project construction.

OWNER OCCUPANCY

Partial Owner Occupancy: The Owner reserves the right to place and install equipment as necessary in completed areas of the work to occupy such areas prior to substantial completion, provided that such occupancy does not substantially interfere with completion of work. Such placing of equipment and partial occupancy shall not constitute acceptance of work or any part of the work.

END OF SECTION 011100

SECTION 012500 - SUBSTITUTION PROCEDURES

1. GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions made prior to and after award of Contract.

B. Related Sections:

1. Division 0 through 32 for specific requirements and limitations for substitutions.

C. Standards: Industry standards to products specified.

1.3 DEFINITIONS

A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

2. Substitutions for Convenience: Changes proposed in order to meet other Project requirements but may offer advantage to the Owner.

C. The following are not considered substitutions:

1. Revisions to the Contract Documents requested by the Owner or Architect/Engineer (A/E).

2. Specified options of products and construction methods included in the Construction Documents.

1.4 PRE-BID SUBSTITUTIONS

A. The naming of specified items on the drawings or in the specifications means that such named items are specifically desired by the A/E and/or Owner. If the words "or equal" or "or approved substitute" follows such named items, substitution requests may be submitted. **REQUESTS FOR SUBSTITUTIONS MUST BE RECEIVED BY ARCHITECT/ENGINEER (A/E) NOT LATER THAN SEVEN (7) BUSINESS DAYS PRIOR TO BID OPENING.**

B. No substitutions will be considered after receipt of bids unless conditions outlined in Part 2.1 are met as determined by the A/E. Any substitutions considered per Part 2.1 shall be subject to A/E and Owner's approval.

C. Substitution Request Submittal Procedures: Substitution requests must be submitted on Substitution Request Form and Contractor's Statement of Conformance, found at the end of this Section.

NOTE: Substitution Request forms will only be accepted/reviewed when sent directly from the Contractor to the Architect.

1. Request for Substitution must name the exact item proposed with complete information included as specified on the forms.

2. All backup data required to sufficiently determine the product's specifications must be attached to the Substitution Request forms.

3. Only one product or system may be included in each Substitution Request; use separate Substitution Request forms for each product or system submitted.

4. Submit Substitution Request forms and backup data combined into one Portable Data Format (PDF) file.

5. The Substitution Request PDF file shall be named with applicable specification section number, followed by a brief description of the item submitted for review; i.e., 09511_AcousticalCeilingPanels.pdf.

6. Submit Substitution Request PDF file as directed by the Architect/Engineer.
 7. Incomplete Substitution Requests will not be reviewed.
 8. Substitution Requests submitted in a manner that does not comply with these requirements will not be reviewed.
 9. Submit physical samples as directed by the Architect/Engineer if requested.
- D. The Architect/Engineer is the sole judge as to the equality of proposed substitutions. Only Substitution Requests approved in writing by the Architect/Engineer are valid.
- E. If any substitution will affect a correlated function, adjacent construction, or the work of other trades or contractors, the necessary changes and modifications to the affected work will be considered as part of the substitution, to be accomplished without additional cost to the Owner, if and when accepted.
- F. The Architect/Engineer will review substitution requests submitted in accordance with the terms and conditions of these Contract Documents within ten days prior to the Bid Opening date. The Architect/Engineer is not obligated or required to review any and all substitution requests. The Architect/Engineer is not obligated to inform bidders of incomplete and non-accepted requests.
- G. Acceptance of substitutions will be indicated in writing by Addendum.
- H. Under no circumstances shall be Architect/Engineer's acceptance of any such substitution relieve the Contractor from any terms and conditions of the Contract Documents, including timely, full and proper performance of the work.

1.5 SUBMITTALS

- A. Substitution Request Submittals: Requests for substitution may be considered after commencement of the Work subject to conditions listed under Part 2.1. Requests received more than 30 days after commencement of the Work may be considered or rejected at the discretion of the Architect/Engineer. **NOTE: Substitution Request forms will only be accepted/reviewed when sent directly from the Contractor to the Architect.**
1. Substitution Request Submittal Procedures: Submit Substitution Requests as directed by the Architect/Engineer.
 2. Identify product or fabrication or installation method to be replaced in each request. Include Specification Section number and title and Drawing numbers and titles.
 3. Substitution Request Form: Use Substitution Request Form and Contractor's Statement of Conformance found at the end of this Section.
 4. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features, and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance and requirements indicated.

- i. Research reports evidencing compliance with building code in effect for Project.
- j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution is equal to or better in every significant respect and complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated and will perform adequately in the application indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

5. Architect/Engineer's Action: If necessary, Architect/Engineer will request additional information or documentation for evaluation within seven days of receipt of a request for substitution.

B. Submittal Procedure:

1. Substitution requests must be submitted on Substitution Request Form and Contractor's Statement of Conformance, found at the end of this Section.
2. Request for substitution must name the exact item proposed with complete information included as specified on the forms.
3. All backup data required to sufficiently determine the product's specifications must be attached to the Substitution Request forms.
4. Only one product or system may be included in each substitution request; use separate Substitution Request Forms for each product or system submitted.
5. Submit Substitution Request Forms and backup data combined into one Portable Data Format (PDF) file.
6. The Substitution Request PDF file shall be named with applicable specification section number, followed by a brief description of the item submitted for review.
7. Submit Substitution Request PDF file as directed by the Architect/Engineer.
8. Incomplete Substitution Requests will not be reviewed.
9. Substitution Requests submitted in a manner that does not comply with these requirements will not be reviewed.
10. Submit physical samples as directed by the Architect/Engineer if requested.

1.6 QUALITY ASSURANCE

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

1.7 PROCEDURES

A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions at no additional cost to Owner.

2. PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 30 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect/Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect/Engineer will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.

- b. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
- c. The specified product or method of construction cannot be provided within the Contract Time.
- d. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
- e. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
- f. Substitution request is fully documented and properly submitted.
- g. Requested substitution will not adversely affect Contractor's construction schedule.
- h. Requested substitution has received necessary approvals of authorities having jurisdiction.
- i. Requested substitution is compatible with other portions of the Work.
- j. Requested substitution has been coordinated with other portions of the Work.
- k. Requested substitution provides specified warranty.
- l. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect/Engineer may consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect/Engineer.

1. Conditions: Architect/Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect/Engineer will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations of merit, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect/Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
- b. Requested substitution does not require revisions to the Contract Documents.
- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is timely, fully documented and submitted in accordance with the requirements of this Section.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

C. The Contractor's submittal and Architect/Engineer's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

END OF SECTION 012500



CONTRACTORS STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT DOCUMENTS

I / We have investigated the proposed substitution. I / We:

1. believe that it is equal or superior in all respects to the originally specified product, except as stated in Paragraph C of the Post-Bid Request for Substitution Form;
2. will provide the same warranty as required in AIA A201 General Conditions;
3. will provide the same special warranty or guaranty as specified;
4. have included all cost data and cost implications of the proposed substitution;
5. will pay redesign and special inspection costs caused by the use of this product;
6. will pay additional costs to other contractors caused by the substitution;
7. will coordinate the incorporation of the proposed substitution in the Work;
8. will modify other parts of the Work as may be needed, to make all parts of the Work complete and functioning;
9. waive future claims for added cost to Contractor caused by the proposed substitution.

Contractor: _____
 Signature _____ Date _____

 Firm Telephone _____

 Address City, State Zip _____

ARCHITECT/ENGINEER'S REVIEW AND ACTION

Provide more information in the following categories. Resubmit.

Sign Contractor's Statement of Conformance. Resubmit.

The proposed substitution is approved with the following conditions:

The proposed substitution request is rejected.

The following changes will be made by Change Order:

Addition to / deduction from the Contract Sum: \$ _____

Addition to / deduction from the Contract Time: _____ days.

By: _____

Date: _____

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: General Contractor will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. The Architect will compile the Proposal Request and issue a Construction Change Directive (CCD). If necessary, the description will include supplemental or revised Drawings and Specifications.
 1. Work Change Proposal Requests issued by General Contractor are not instructions either to stop work in progress or to execute the proposed change.
 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Proposal Request Form: Use form acceptable to Architect.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on form included in Project Manual. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order, if applicable.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Provide detailed information for work required by the Construction Change Directive, if work requires modifications to the Contract Sum or Contract Time, prior to proceeding with the work.
 - 1. If additional costs are anticipated prior to starting the directed change(s), submit an itemized account and supporting data necessary to substantiate cost and time adjustment to the Contract for approval to proceed. Requests for an adjustment in the contract amount or time will not be considered if the Contractor(s) proceeds with the work prior to obtaining the required approvals.

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.

- b. Name of Architect.
 - c. Architect's Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent (5%) of the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site.
6. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.
7. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent (5%) of the Contract Sum and subcontract amount.
8. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
1. Other Application for Payment forms proposed by the Contractor shall be acceptable to Architect and Owner. Submit forms for approval with initial submittal of schedule of values.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit one electronic signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
 5. Products list (preliminary if not final).
 6. Sustainable design action plans, including preliminary project materials cost data.
 7. Submittal schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal consultants.
 10. Copies of building permits.
 11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 12. Initial progress report.
 13. Report of preconstruction conference.
 14. Certificates of insurance and insurance policies.
 15. Performance and payment bonds.
 16. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706.

5. AIA Document G706A.
6. AIA Document G707.
7. Evidence that claims have been settled.
8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Startup construction schedule.
 - 2. General Contractor's Construction Schedule.
 - 3. Construction schedule updating reports.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Site condition reports.
 - 7. Unusual event reports.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for completing an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for completing an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
1. Working electronic copy of schedule file, where indicated.
 2. PDF file.
- B. Startup construction schedule.
1. Submittal of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.
- E. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
1. Activity Report: List of activities sorted by activity number and then early start date, or actual start date if known.
 2. Logic Report: List of preceding and succeeding activities for each activity, sorted in ascending order by activity number and then by early start date, or actual start date if known.
 3. Total Float Report: List of activities sorted in ascending order of total float.
 4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.
- F. Construction Schedule Updating Reports: Submit with Applications for Payment.
- G. Daily Construction Reports: Submit at weekly intervals.

- H. Material Location Reports: Submit at monthly intervals.
- I. Site Condition Reports: Submit at time of discovery of differing conditions.
- J. Unusual Event Reports: Submit at time of unusual event.
- K. Qualification Data: For scheduling consultant.

1.5 QUALITY ASSURANCE

- A. Prescheduling Conference: Conduct conference at Project to Review methods and procedures related to the preliminary construction schedule and Contractor's Construction Schedule, including, but not limited to, the following:
 - 1. Review software limitations and content and format for reports.
 - 2. Verify availability of qualified personnel needed to develop and update schedule.
 - 3. Discuss constraints, including phasing, work stages, area separations, interim milestones, and partial Owner occupancy.
 - 4. Review delivery dates for Owner-furnished products.
 - 5. Review schedule for work of Owner's separate contracts.
 - 6. Review submittal requirements and procedures.
 - 7. Review time required for review of submittals and resubmittals.
 - 8. Review requirements for tests and inspections by independent testing and inspecting agencies.
 - 9. Review time required for Project closeout and Owner startup procedures.
 - 10. Review and finalize list of construction activities to be included in schedule.
 - 11. Review procedures for updating schedule.

1.6 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of payments, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.7 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
 4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 6. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use-of-premises restrictions.
 - f. Seasonal variations.
 - g. Environmental control.
 3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.

1. Startup and placement into final use and operation.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 1. Unresolved issues.
 2. Unanswered Requests for Information.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
 5. Pending modifications affecting the Work and the Contract Time.
- G. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate final completion percentage for each activity.
- H. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- I. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

1.8 CPM SCHEDULE REQUIREMENTS

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within 14 days of date established for the Notice to Proceed. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

- C. CPM Schedule: Prepare Contractor's Construction Schedule using a time-scaled CPM network analysis diagram for the Work.
1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 60 days after date established for the Notice to Proceed.
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates.
 2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility interruptions.
 - g. Installation.
 - h. Work by Owner that may affect or be affected by Contractor's activities.
 - i. Testing and inspection.
 - j. Commissioning.
 - k. Punch list and final completion.
 - l. Activities occurring following final completion.
 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.

- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.
- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
 - 1. Contractor or subcontractor and the Work or activity.
 - 2. Description of activity.
 - 3. Main events of activity.
 - 4. Immediate preceding and succeeding activities.
 - 5. Early and late start dates.
 - 6. Early and late finish dates.
 - 7. Activity duration in workdays.
 - 8. Total float or slack time.
 - 9. Average size of workforce.
 - 10. Dollar value of activity (coordinated with the schedule of values).
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
 - 1. Identification of activities that have changed.
 - 2. Changes in early and late start dates.
 - 3. Changes in early and late finish dates.
 - 4. Changes in activity durations in workdays.
 - 5. Changes in the critical path.
 - 6. Changes in total float or slack time.
 - 7. Changes in the Contract Time.

1.9 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 - 7. Testing and inspection.
 - 8. Accidents.
 - 9. Meetings and significant decisions.
 - 10. Unusual events.
 - 11. Stoppages, delays, shortages, and losses.
 - 12. Meter readings and similar recordings.
 - 13. Emergency procedures.
 - 14. Orders and requests of authorities having jurisdiction.

15. Change Orders received and implemented.
 16. Construction Change Directives received and implemented.
 17. Services connected and disconnected.
 18. Equipment or system tests and startups.
 19. Partial completions and occupancies.
 20. Substantial Completions authorized.
- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
 2. Material stored prior to previous report and since removed from storage and installed.
 3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- D. Unusual Event Reports: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, responses by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.
1. Submit unusual event reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

1. GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work including: Submittal schedule, shop drawings, product data, samples and requests for product approvals as substitutions.

B. Related work in other sections: Refer to Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not necessarily limited to: Permits, applications for payment, performance and payment bonds and insurance certificates.

1.2 DEFINITIONS

A. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 SUBMITTAL PROCEDURE

A. GENERAL CONTRACTOR shall review all submittals, then forward with a completed transmittal form to the Architect who shall then review.

1. General Contractor will be used for submitting submittals, as such all submittals shall be submitted in the form of a PDF file. Each product being submitted must be submitted with a separate cover sheet.

a. Along with the PDF File, contractors will be required to submit to the Architect 1 Full Size Hard Copy of Shop Drawings for review as deemed necessary.

b. After review of shop drawings General Contractor will be required to submit to the Architect 1 Full Size Hard Copy of the reviewed Shop Drawings.

B. Any items submitted without the required transmittal letter, statement of deviations, and information set forth below will not be considered.

1. Project title, address, Architect's project number and date.

2. Description or names of equipment, materials and items included, keyed to specification section and paragraph where applicable.

3. Locations at which materials or equipment are to be installed.

4. Name, address and telephone number of an individual to contact for additional information.

5. Statement of deviations from drawings and specifications.

C. The Architect's review of submittals is a gratuitous assistance, and does not relieve the Contractor from responsibility for errors or omissions in the submittals. This refers to dimensional or quantitative errors or omissions, or variations from Performance Standards implied by the Contract Documents. The review of submittals by the Architect will be general, and shall not be construed:

1. As permitting any departure from the Contract requirements;

2. As relieving the Contractor of the responsibility for any error in details, dimensions or otherwise that may exist in the submittal;

3. As reviewed departures from additional details or instructions previously furnished by the Architect, unless the Architect has specifically approved the variation in writing.

D. Any error or omission in submittals discovered after the submittal has been processed by the General Contractor and the Architect shall be corrected by the Contractor at no cost to the Owner, regardless of any “reviewed” stamp which might appear on the submittal.

E. The Architect or his consultant will review each submittal and acknowledge his review with an action stamp. The review status of designations used on the action stamp are defined as follows:

1. Reviewed: Signifies item represented in the submittal conforms with the design intent, complies with the intent of the Contract Documents and is reviewed for incorporation in the work. Contractor is to proceed with fabrication or procurement and related work.
2. Furnish as Corrected: Signifies item represented in the submittal conforms with the design concept, complies with the intent of the Contract Documents and is reviewed for incorporation in the work in accordance with the Architect or Consultants notations. Contractor is to proceed with the work in accordance with the Architect or Consultant's notations marked on the returned submittal or letter of transmittal. Re-submittal is not required.
3. Revise and Resubmit: Signifies item represented in the submittal appears to conform with the design concept and comply with the intent of the Contract Documents, but information is either insufficient or contains discrepancies which prevent the Architect or his Consultant from completing his review. Contractor is to resubmit revised information. Fabrication or procurement of the item and related work is not to proceed until the submittal is acceptable.
4. Rejected: Signifies item represented in the submittal does not conform with the design concept or comply with the intent of the Contract Documents and is not recommended for incorporation in the work. Contractor shall submit items responsive to the Contract Documents.

1.4 TIMING OF SUBMISSIONS

A. Contractors shall coordinate submittal preparation with performance of construction activity, and with purchasing, fabrication, delivery and other submittals and related activities. Transmit in advance of performance of related activities to avoid delay.

B. Make all submittals far enough in advance of scheduled dates of installation to provide adequate time for reviews, testing, color selections, securing necessary approvals, possible revision and re-submittal.

1. It is expected that all submittals will be submitted in a timely manner.
2. Architect shall review Contractor's submittal and shall not unreasonably delay or withhold approval. Architect's action in reviewing submittals shall be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review.
3. The completion time of the Contract will not be extended for delays caused by tardiness of submittals.
 - a. Contractor will assume full responsibility for providing materials as specified at their risk to maintain schedule.
4. Upon receipt of rejected submittals, Contractors will have seven (7) Calendar days to revise and resubmit.
5. If the General Contractor elects to conduct submittal reviews in an electronic format, the Architect will periodically (or as requested by the Contractor) send to the Contractor a copy of their submittal log showing the status of received submittals for the Contractor's use. It shall be the responsibility of the Contractor to review the Architect's logs to

determine the following: correct status of reviewed submittals, dates indicated, and to notify the Architect if submittals are missing or not shown on the Architect's logs.

1.5 PRE-CONSTRUCTION SUBMITTALS

A. Within seven (7) calendar days of the Receipt of the Contract, Contractors shall submit the following to the Architect for review by the Owner:

1. A list of Material Suppliers (including addresses, telephone numbers and person[s] in charge of this project).

B. Within seven (7) calendar days following notice to proceed, Contractors shall submit the following to the Architect for his review and the Owner's and Architect's information:

1. Anticipated monthly payment amounts.
2. Schedule for critical dates for Key Shop Drawings.

1.6 SHOP DRAWINGS

A. Submit electronic submittals as PDF electronic files. Submit six (6) copies of all shop drawing submittals (unless a different number is indicated in the specification) for initial review.

1. General Contractor to review and forward acceptable shop drawings to the Architect.
2. Architect and his Consultants will retain one copy of reviewed submittals for their records and one copy for transmittal to the Owner.
3. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
4. Contractor shall make additional copies/prints of the annotated submittal, as necessary, for distribution to coordinate the Work.
 - a. Use only the annotated submittal with Architect's (or Consultant's) review stamp to make additional prints for distribution to coordinate the Work.
5. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.

B. Make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the item and its method of connection to the work. Minimum requirements for drawings are as follows:

1. Floor Plans/Layout Plans shall not be less than 1/4" to 1'-0" scale, except for structural shop drawings which shall be at 1/8" to 1'-0".
2. Elevations shall not be less than 1/2" to 1'-0" scale.
3. Details shall not be less than 3" to 1'-0" scale. Structural details and Sections shall be drawn at a scale not less than 1/2" to 1'-0".
4. Contract Drawings modified and submitted as shop drawings will not be accepted.

1.7 SAMPLES

A. Unless specified otherwise, submit three (3) of each sample required to be retained by the Architect and one each to be returned to the General Contractor. Submit additional samples as required for use by the Contractor.

1. An Electronic file in PDF format with a photo of the sample included will be required to be submitted, in addition to the three (3) samples required above.

1.8 MANUFACTURER'S DATA, LISTS AND SCHEDULES

A. Submit manufacturer's descriptive and technical data including catalog sheets for materials, equipment and fixtures, showing dimensions, performance characteristics and capacities, wiring diagrams and controls, schedules and other pertinent data.

1. All required lists and schedules shall be typewritten or neatly printed.

B. All data submitted for review shall be clearly marked to specifically identify the data applicable to the Project. Marking shall be reproducible, but not obliterate data marked.

C. Submit electronic submittals as PDF electronic files. Submit all manufacturer's data, lists and schedule submittals to the General Contractor for initial review.

1. General Contractor will review and forward acceptable submittals to the Architect.

2. Architect and his Consultants will make copies of reviewed submittals for their records and one copy for transmittal to the Owner.

3. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

4. Contractor shall make additional copies/prints of the annotated submittal, as necessary, for distribution to coordinate the Work.

a. Use only the annotated submittal with Architect's (or Consultant's) review stamp to make additional prints for distribution to coordinate the Work.

5. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.

D. In accordance with the submittal schedule, Architect shall review and/or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, for the limited purpose of checking for conformance with the Contract Documents and applicable laws, statutes, ordinances, codes, rules and regulations. Review of such submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems designed by the Contractor, which are the Contractor's responsibility to the extent required by the Contract Documents. Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures. Architect's review of a specific item shall not indicate approval of an assembly of which the item is a component.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 CONFLICTING REQUIREMENTS

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

1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Description of test and inspection.
 - 3. Identification of applicable standards.
 - 4. Identification of test and inspection methods.
 - 5. Number of tests and inspections required.
 - 6. Time schedule or time span for tests and inspections.
 - 7. Entity responsible for performing tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.
- C. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

- C. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. **Specialists:** Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. **Testing Agency Qualifications:** An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. **Preconstruction Testing:** Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.

- f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.
 - g. As outlined in spec section 014529 Testing Laboratory Services.
 - h. Refer Plans for additional requirements.
2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 6. Demolish and remove mockups when directed, unless otherwise indicated.

1.6 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders
 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

- a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
 7. Perform tests as required per IBC Chapter 17, current edition, with the exception of any testing outlined in spec section 014529 testing laboratory services as provided by General Contractor.
- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.

- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- G. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for the Notice to Proceed.
 - 1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.7 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
- B. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
 - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date test or inspection results were transmitted to Architect.
 - 4. Identification of testing agency or special inspector conducting test or inspection.

- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. See Division 01 Section "Contract Modification Procedures" for division of responsibilities for temporary facilities and controls.
- C. See Division 01 Section "Execution" for progress cleaning requirements.

1.2 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, Engineers, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Water Service: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations, within limits of existing electrical capacity.

1.3 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.76-mm-) thick, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.
- B. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide concrete bases for supporting posts..
- C. Wood Enclosure Fence: Treated Plywood, 8 feet (2.4 m) high, framed with four 2-by-4-inch (50-by-100-mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading (Not required).
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations (Not required).

2.3 EQUIPMENT

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

PART 3 - EXECUTION

3.1 INSTALLATIOIN, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
 - 1. Where installations below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Electric Power Service: Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.
- E. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines. Comply with NFPA 241.
 - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Traffic Controls: Comply with Owner requirements.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Provide temporary parking areas for construction personnel, and for meetings' attendees.
- D. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
- E. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 1. Prohibit smoking in hazardous fire-exposure and construction areas, as per new Law.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Installation of the Work.
 - 3. Cutting and patching.
 - 4. Progress cleaning.
 - 5. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 017700 "Closeout Procedures" for submitting Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.4 PREINSTALLATION MEETINGS

- A. Cutting and Patching Conference: Conduct conference at Project site.
 - 1. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:
 - a. Contractor's superintendent.
 - b. Trade supervisor responsible for cutting operations.
 - c. Trade supervisor(s) responsible for patching of each type of substrate.

- d. Mechanical, electrical, and utilities subcontractors' supervisors, to the extent each trade is affected by cutting and patching operations.
2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
 - a. Primary operational systems and equipment.
 - b. Plumbing piping systems.
 - c. Control systems.
 - d. Communication systems.
 - e. Fire-detection and -alarm systems.
 - f. Conveying systems.
 - g. Electrical wiring systems.
 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Sprayed fire-resistive material.
 - e. Equipment supports.
 - f. Piping, ductwork, vessels, and equipment.
 - g. Noise- and vibration-control elements and systems.
 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services; and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work.

2. List of detrimental conditions, including substrates.
 3. List of unacceptable installation tolerances.
 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.

3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Repair or remove and replace damaged, defective, or nonconforming Work.
 - 1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

3.5 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching accordingly.
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
 - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements and limitations for cutting and patching of Work.
- B. Related Requirements:
 - 1. Section 01 11 00 "Summary of Work".
 - 2. Section 01 33 00 "Submittal Procedures".
 - 3. Individual Product specification Sections:
 - a. Cutting and patching incidental to work of the section.
 - b. Advance notification to other sections of openings required in work of those sections.
 - c. Limitations on cutting structural members.

1.2 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which 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 Owner or separate contractor.
- B. Include in request:
 - 1. Identification of Project.
 - 2. Location and description of affected Work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed Work and Products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on work of Owner or separate contractor.
 - 7. Written permission of affected separate contractor.
 - 8. Date and time work will be executed.

PART 2 - (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, access conditions affecting performance of work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work.
- C. Maintain excavations free of water.

3.3 CUTTING

- A. Execute cutting and fitting to complete the Work.
- B. Uncover work to install improperly sequenced work.
- C. Remove and replace defective or non-conforming work.
- D. Remove samples of installed work for testing when required.

END OF SECTION 017329

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT & DISPOSAL

1. GENERAL

The work of this section consists of the periodic removal of construction debris from the job site and associated public streets, roads, easements and rights-of-way used during construction. In addition, the final detailed cleaning of the site and building prior to Owner acceptance of the project is included.

2. MATERIALS: None

3. EXECUTION

- 3.1 General: The Contractor shall keep the construction site sufficiently clean so as to allow a safe and expeditious construction operation to be implemented. Periodically and upon completion of the work and before acceptance and final payment is made, the Contractor shall clean and remove from the road rights-of-way, easements, public and private property, adjacent property, all surplus, discarded materials, perishable matter, rubbish and temporary structures. He shall restore in an acceptable manner all property, both public and private, which may have been damaged on account of the prosecution of the work and shall leave the roadway, easements, public and private property neat and presentable. The building shall be thoroughly cleaned and conditioned for the Owner to occupy.
- 3.2 Open Burning: During construction of the project, efforts shall be taken to prohibit the open burning of refuse.
- 3.3 Dust Control: Excavation and operations may require control measures to prevent the creation of excessive dust.
- 3.4 Water Pollution Control: The Contractor shall exercise caution to guard against the degradation of the waters of the State due to construction related pollutants (silt, debris, and petroleum products), and raw untreated sewage.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
- B. Related Requirements:
 - 1. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 DEFINITIONS

- A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

1.4 ACTION SUBMITTALS

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

1.5 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest-control inspection.

1.6 MAINTENANCE MATERIAL SUBMITTALS

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

1.7 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.

- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Owner. Label with manufacturer's name and model number.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner's signature for receipt of submittals.
5. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Instruct Owner's personnel in maintenance of products.
3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
4. Complete final cleaning requirements.
5. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of

unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

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

1.8 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:

1. Submit a final Application for Payment.
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit Final Completion photographic documentation.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

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

1.9 LIST OF INCOMPLETE ITEMS

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

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor, listed by room or space number.
2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.

- e. Page number.
4. Submit list of incomplete items in the following format:
 - a. MS Excel Electronic File: Architect will return annotated file.
 - b. Web-Based Project Software Upload: Utilize software feature for creating and updating list of incomplete items (punch list).

1.10 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- E. Warranties in Paper Form:
 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- F. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

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

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations.
 - i. Vacuum and mop concrete.
 - j. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - k. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - l. Remove labels that are not permanent.
 - m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

- p. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - q. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
 - r. Clean strainers.
 - s. Leave Project clean and ready for occupancy.
- C. Construction Waste Disposal: Comply with waste-disposal requirements in Section 017419 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations required by Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Miscellaneous record submittals.
- B. Related Requirements:
 - 1. Section 017700 "Closeout Procedures" for general closeout procedures.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set(s) of marked-up record prints.
 - 2. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit PDF electronic files of scanned record prints and one of file prints.
 - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit PDF electronic files of scanned record prints and two set(s) of prints.
 - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit one paper and annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one paper and annotated PDF electronic files and directories of each submittal.

1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Reports: Submit written report weekly indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

1.4 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding photographic documentation.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduits.
 - d. Revisions to electrical circuitry.
 - e. Actual equipment locations.
 - f. Locations of concealed internal utilities.
 - g. Changes made by Change Order or Construction Change Directive.
 - h. Changes made following Architect's written orders.
 - i. Details not on the original Contract Drawings.
 - j. Field records for variable and concealed conditions.
 - k. Record information on the Work that is shown only schematically.
 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Format: Annotated PDF electronic file.
3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect and General Contractor.
 - e. Name of Contractor(s).

1.5 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 5. Note related Change Orders, record Product Data, and record Drawings where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file.

1.6 RECORD PRODUCT DATA

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- C. Format: Submit record Product Data as annotated PDF electronic file.

1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

1.7 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as PDF electronic file scanned PDF electronic file(s) of marked-up miscellaneous record submittals.

1.8 MAINTENANCE OF RECORD DOCUMENTS

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents: Store record documents in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION 017839

SECTION 092900 – GYPSUM BOARD

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. Interior Gypsum Board
2. Moisture- and Mold Resistant Gypsum Board (Green Board).
3. Trim Accessories
4. Joint Treatment Materials

- B. Related Requirements:

1. Section 09 91 23 “Interior Painting.”

1.3 ACTION SUBMITTALS

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

- B. Certificates: Regarding Shaft Walls, submit manufacturer’s certification of compliance with fire and sound requirements for each system shown. Include name of manufacturer and complete description of door frames, elevator door frames, electrical boxes, and other penetrations included in each tested assembly for each system shown.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.5 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.

- C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or blotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 MANUFACTURER

- A. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. American Gypsum Co.
 - 2. CertainTeed Corporation.
 - 3. Georgia-Pacific Gypsum LLC.
 - 4. National Gypsum Company.
 - 5. Temple-Inland.
 - 6. USG Corporation.

2.4 INTERIOR GYPSUM BOARD MATERIALS

- A. Gypsum Board, Type X: ASTM C 1396/C 1396M.
 - 1. Thickness: 5/8 inch (15.9 mm).
 - 2. Long Edges: Tapered.
- B. Moisture- and Mold-Resistant Gypsum Board (Green Board): ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.
 - 1. Core: 5/8 inch (15.9 mm), Type X.
 - 2. Long Edges: Tapered.
 - 3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.5 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
 - 1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
 - 2. Shapes:
 - a. Cornerbead.
 - b. Bullnose bead.
 - c. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - d. L-Bead: L-shaped; exposed long flange receives joint compound.
 - e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
 - f. Expansion (control) joint.

2.6 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 - 1. Interior Gypsum Board: Paper.
- C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Prefilling: At open joints or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
 - 3. Fill Coat: For second coat, use setting-type, sandable topping compound.
 - 4. Finish Coat: For third coat, use setting-type, sandable topping compound.
 - 5. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound.
 - 6. Level 5 finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
- D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.
- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.3 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Wallboard Type: As indicated on Drawings.
 - 2. Type X: As indicated on Drawings.
 - 3. Moisture- and Mold-Resistant Type: In toilet rooms and other walls with plumbing fixtures.
- B. Single-Layer Application:
 - 1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.

2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
 - b. At high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.
3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.
- C. Interior Trim: Install in the following locations:
 1. Cornerbead: Use at outside corners unless otherwise indicated.
 2. LC-Bead: Use at exposed panel edges.
 3. L-Bead: Use where indicated.

3.5 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish panels to Level 5 when exposed to view and according to ASTM C 840:

3.6 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 095113 – ACOUSTICAL PANEL CEILINGS

1. GENERAL: Furnish all labor, materials, equipment, and services necessary for the installation of all acoustical ceilings, complete with suspension systems, and related accessories as shown on the plans or as specified herein.
2. MATERIALS: Ceiling systems shall be of the type and in locations shown on the plans and as noted:
 - 2.1 Non-Fire-Resistance-Rated Single Web Steel Suspension System: Manufacturer's standard system roll-formed from pre-finished cold-rolled steel sheet with 15/16" wide exposed faces on flanges of structural members; other characteristics as follows:
 - 2.1.1 Structural Classification: Intermediate-Duty System.
 - 2.1.2 2' x 2' configuration at standard acoustical board ceilings.
 - 2.1.3 Finish: White.
 - 2.1.4 Style: Tegular
 - 2.2 Suspension System: The suspension system shall be for lay-in ceiling - double web main and cross runners of cold-rolled steel, elector-galvanized plated, with smooth matte white painted finish on aluminum cap. Intermediate duty for use in wet environments.
 - 2.2 Suspension System: The suspension system shall be for lay-in ceiling - double web main and cross runners of cold-rolled steel, hot-dipped galvanized body, with smooth matte painted finish on steel cap. Moldings to be angle type with exposed edge hemmed with finish to match main and cross runners. System components shall be equal to USG, Donn DX/DXL, 15/16" Tee System. Color to match ceiling tile finish – White – refer to room finish schedule for locations.
 - 2.3 Acoustical Panels (ACT): All acoustical panels shall be:

TO MATCH EXISTING MSSU STANDARD CEILING TILE as installed in TPAC.

Note: any/all cut edges (exposed) shall be painted in the field to match finished tile.

3. EXECUTION

- 3.1 All acoustical materials and suspension systems shall be installed by a contractor thoroughly experienced with this type of installation and approved by the manufacturer. Installation shall be in strict accordance with the manufacturer's recommendations.
- 3.2 The building shall be examined before beginning work to determine that it is properly enclosed and the structure is in proper condition to receive acoustical materials and suspension system.
- 3.3 Preparation: Installation of acoustical treatment shall not begin until all wet work, such as plastering, concrete work, etc. is completely dry. The acoustical Contractor shall be responsible for the examination and acceptance of all surfaces and conditions affecting the proper material installation, and shall not proceed until all unsatisfactory conditions are corrected.
- 3.4 Consult Electrical Lighting Plans for layout of grid system and follow same throughout.
- 3.5 Suspend main tees from joists and other structural framing with galvanized wire not smaller than 12 gauge at each framing member. No attachment shall be made from decking. Tie around structure securely and give each wire end a minimum of 3 twists around itself. Level, space and align main beams at 4'-0" o.c.
- 3.6 Provide additional 12 gauge wire hangers to support light fixtures.
 - 4.6.1 At each corner of 2' X 4' or larger fixtures.
 - 4.6.2 At each corner of fixtures where corners do not occur at regularly spaced hanger wires.
- 3.7 Install cross-tees of proper length at right angles to main beams to create a grid. Where recessed light fixtures, diffusers or other openings require same, place a cross tee.

3.8 Under ducts or other obstructions, adjust as necessary to provide secure suspension system, maintaining grid layout.

3.9 Provide channel or angle shape perimeter wall molding at level for proper ceiling height.

3.10 Provide angle molding at ceiling drops and carry acoustical panels up drop face where necessary.

3.11 Lay-in acoustical panels.

3.12 Protect openings for ducts and/or recessed light fixture as required for maintaining 1 hour (assembly) fire rating as shown by approved testing laboratory or fire rating concern.

3.13 Installation: All acoustical materials and suspension systems shall be installed in strict accordance with the manufacturer's recommendations. Installation of acoustical materials shall occur after all components in the ceiling plenum are installed. The building shall be in proper condition to receive the acoustical materials and suspension system before any of the material shall be installed. The acoustical materials shall be installed under conditions of normal occupancy. The system shall be installed to permit border units of the greatest possible size. All members shall be aligned for sure level surface and straight lines. Installation shall conform to the recommendations of ASTM C636-76, "Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels". Corners shall be mitered where wall moldings intersect or corner caps shall be used.

3.14 Clean-up: Following installation, all soiled or discolored surfaces shall be cleaned. Units which are damaged or improperly installed shall be removed and replaced.

END OF SECTION 095113

SECTION 099123 – INTERIOR PAINTING

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 surface preparation and the application of paint systems on interior substrates.
 - 1. Concrete masonry units (CMUs).
 - 2. Steel and iron.
 - 3. Gypsum board.

1.3 DEFINITIONS

- A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- F. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
 - 1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
 - 2. Indicate VOC content.
- B. Samples for Initial Selection: For each type of topcoat product.

- C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 - 2. Apply coats on Samples in steps to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- D. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Benjamin Moore & Co.
 - 2. Coronado Paint; Benjamin Moore Company.
 - 3. Diamond Vogel Paints.
 - 4. Kwal Paint; Comex Group.
 - 5. PPG Architectural Coatings.
 - 6. Pratt & Lambert.
 - 7. Sherwin-Williams Company (The).

8. Valspar Corporation - Architectural (Pro).

2.2 PAINT, GENERAL

- A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
- B. Material Compatibility:
 1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- C. VOC Content of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24); these requirements do not apply to paints and coatings that are applied in a fabrication or finishing shop:
 1. Flat Paints, Coatings, and Primers: VOC content of not more than 50 g/L.
 2. Nonflat Paints, Coatings, and Primers: VOC content of not more than 150 g/L.
 3. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
 4. Floor Coatings: VOC not more than 100 g/L.
 5. Nonflat Topcoat Paints: VOC content of not more than 150 g/L.
 6. Primers, Sealers, and Undercoaters: VOC content of not more than 200 g/L.
 7. Dry-Fog Coatings: VOC content of not more than 400 g/L.
 8. Zinc-Rich Industrial Maintenance Primers: VOC content of not more than 340 g/L.
 9. Pre-Treatment Wash Primers: VOC content of not more than 420 g/L.
- D. Chemical Components of Field-Applied Interior Paints and Coatings: Provide topcoat paints and anti-corrosive and anti-rust paints applied to ferrous metals that comply with the following chemical restrictions; these requirements do not apply to paints and coatings that are applied in a fabrication or finishing shop:
 1. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
 2. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.
 - g. Di (2-ethylhexyl) phthalate.
 - h. Di-n-butyl phthalate.
 - i. Di-n-octyl phthalate.

- j. 1,2-dichlorobenzene.
- k. Diethyl phthalate.
- l. Dimethyl phthalate.
- m. Ethylbenzene.
- n. Formaldehyde.
- o. Hexavalent chromium.
- p. Isophorone.
- q. Lead.
- r. Mercury.
- s. Methyl ethyl ketone.
- t. Methyl isobutyl ketone.
- u. Methylene chloride.
- v. Naphthalene.
- w. Toluene (methylbenzene).
- x. 1,1,1-trichloroethane.
- y. Vinyl chloride.

- E. Colors: See Paint Color Schedule at the end of this section.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Concrete: 12 percent.
 - 2. Fiber-Cement Board: 12 percent.
 - 3. Masonry (Clay and CMUs): 12 percent.
 - 4. Wood: 15 percent.
 - 5. Gypsum Board: 12 percent.
 - 6. Plaster: 12 percent.
- C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Plaster Substrates: Verify that plaster is fully cured.
- E. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- F. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
 - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.
- F. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
 - 1. SSPC-SP 3.
- G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- H. Wood Substrates:
 - 1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
 - 2. Sand surfaces that will be exposed to view, and dust off.
 - 3. Prime edges, ends, faces, undersides, and backsides of wood.
 - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
1. Paint the following work where exposed in equipment rooms:
 - a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Tanks that do not have factory-applied final finishes.
 - h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 2. Paint the following work where exposed in occupied spaces:
 - a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - h. Other items as directed by Architect.
 3. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
 - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

- A. CMU Substrates:
 - 1. Latex System MPI INT 4.2A:
 - a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Latex, interior, satin (MPI Gloss Level 4), MPI #43.
 - d. Topcoat: Latex, interior, semi-gloss (MPI Gloss Level 5), MPI #54.
- B. Steel Substrates:
 - 1. High-Performance Architectural Latex System MPI INT 5.1R:
 - a. Prime Coat: Primer, alkyd, quick dry, for metal, MPI #76.
 - b. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.
 - c. Topcoat: Latex, interior, high performance architectural, semi-gloss (MPI Gloss Level 4), MPI #141.
 - d. Location: Prime new and existing unfinished metals, intermediate and topcoat at all metals.

C. Gypsum Board and Plaster Substrates:

1. Latex over Latex Sealer System MPI INT 9.2A:
 - a. Prime Coat: Latex, interior, matching topcoat.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Latex, interior (MPI Gloss Level 2), MPI #44.
 - 1) Location: Ceilings and soffits.
 - d. Topcoat: Latex, interior eggshell (MPI Gloss Level 4), MPI #43.
 - 1) Location: Walls
 - e. Topcoat: Latex, interior, semi-gloss (MPI Gloss Level 4), MPI #54.

3.7 PAINT COLOR SCHEDULE

- A. Paint Color (P-01 to P-03): Refer PLANS (Sheet A102)
 1. Manufacturer: Refer PLANS.

END OF SECTION 099123

SECTION 102113 – TOILET COMPARTMENTS

1. GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Solid plastic toilet compartments and urinal screens.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 REFERENCES

- A. ASTM International (ASTM):
 - 1. B85 - Standard Specification for Aluminum-Alloy Die Castings.
 - 2. B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 3. E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. National Fire Protection Association (NFPA) 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.

1.3 SYSTEM DESCRIPTION

- A. Compartment Configurations:
 - 1. Toilet Partitions: Floor mounted,
 - 2. Urinal screens: Wall mounted.

1.4 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Include dimensioned layout, elevations, trim, closures, and accessories.
 - 2. Product Data: Manufacturer's descriptive data for panels, hardware, and accessories.
 - 3. Samples: 2 x 3 inch samples showing available colors.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years experience in manufacture of solid plastic toilet compartments with products in satisfactory use under similar service conditions.
- B. Installer Qualifications: Minimum 5 years experience in work of this Section.

1.6 WARRANTIES

- A. Provide manufacturer's 25 year warranty against breakage, corrosion, and delamination under normal conditions.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on Hiny Hiders by Scranton Products.
(www.scrantonproducts.com)
- B. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

- A. Doors, Panels and Pilasters:
 - 1. High density polyethylene (HDPE), fabricated from extruded polymer resins, forming single thickness panel.
 - 2. Waterproof and nonabsorbent, with self-lubricating surface, resistant to marks by pens, pencils, markers, and other writing instruments.
 - 3. 1 inch thick with edges rounded to 1/4 inch radius.
 - 4. Fire hazard classification: Not required.
 - 5. Color: Shale.
- B. Aluminum Extrusions: ASTM B221, 6463-T5 alloy and temper.
- C. Aluminum Die Castings: ASTM B85, A380 alloy.
- D. Injection Molded Plastic: High density polyethylene.
- E. Rubber: Abrasion resistant Styrene Butadiene Rubber, 65 to 80 Shore A durometer, black.
- F. Color: Shale. As selected from Manufacturer's full range of colors.

2.3 HARDWARE

- A. Hinges:
 - 1. Inswing hinges:
 - a. Hidden pivot type fabricated from heavy-duty cast aluminum.
 - b. Auto-close feature, adjustable to 15 degree open position.
 - c. Mounted to doors with stainless steel Torx head screws and through bolted to metal post with tamper proof Torx head sex bolts.
 - d. Hinge pivot point: 6 to 8 inches from edge of door; maintain sufficient clearance to water closet.
 - 2. Outswing hinges:
 - a. Fabricated from extruded aluminum.
 - b. Auto-close feature, adjustable to 15 degree open position.
 - c. Surface mounted to doors with stainless steel Torx head screws and fastened to metal posts with countersunk tamper proof screws.
 - 3. Provide for field adjustment of plus or minus 0.125 inch laterally and plus or minus 0.125 inch vertically.
- B. Door Keeper:
 - 1. 3.5 inches long, fabricated from heavy duty extruded aluminum, clear anodized finish.
 - 2. Mount in gap between dividing panel and door.
- C. Latch and Housing:
 - 1. Heavy duty extruded aluminum.
 - 2. Latch housing: Clear anodized finish.
 - 3. Slide bolt and button: Black anodized finish.
- D. Coat Hook/Bumper: Combination type, chrome plated Zamak.
- E. Door Pulls and Push Plates:
 - 1. Heavy duty extruded aluminum, clear anodized finish.
 - 2. Single component providing door pull capability on outswing doors.

2.4 COMPONENTS

- A. Doors and Dividing Panels:
 - 1. 55 inches high, mounted 14 inches above finished floor.
 - 2. Doors: 60 degree angle on two opposite edges for enhanced privacy.
 - 3. Dividing panels: Slotted on one edge to accept wall bracket.
- B. Metal Posts: 82.75 inches high, heavy duty extruded aluminum, clear anodized finish, fastened to foot with stainless steel tamper resistant screw.

- C. Hidden Shoe (Foot): One-piece molded polyethylene invisible shoe inserted into metal post and secured to metal post with stainless steel tamper resistant screw.
- D. Headrail Cap and Corner Cap: One-piece molded polyethylene secured to metal post with stainless steel tamper resistant screw; adjustable to level headrail to finished floor.
- E. Hidden Wall Brackets: 54 inches long, heavy duty extruded aluminum, clear anodized finish, inserted into slotted panel and fastened to panels with stainless steel tamper resistant screws.
- F. Headrail: Heavy duty extruded aluminum, designer anti-grip design, clear anodized finish, fastened to headrail bracket with stainless steel tamper resistant screw and to headrail cap or corner cap with stainless steel tamper resistant screw.
- G. Headrail Brackets: Heavy duty extruded aluminum, clear anodized finish, secured to wall with stainless steel tamper screws.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install compartments in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Install rigid, straight, plumb, and level.
- C. Locate bottom edge of doors and panels 14 inches above finished floor.
- D. Provide uniform, maximum 3/8 inch vertical clearance at doors.
- E. Not Acceptable: Evidence of cutting, drilling, or patching.

3.2 ADJUSTING

- A. Adjust doors and latches to operate correctly.

END OF SECTION 102113

SECTION 10 28 13 - TOILET ACCESSORIES

1. GENERAL

1.1 Furnish and install all toilet accessories as specified herein. Equal products will be acceptable.

2. TOILET ACCESSORIES SCHEDULE - Refer PLANS.

2.1 Refer PLANS for manufacturer/model information.

2.2 General Contractor shall provide pictorial symbol of Men's and Women's Restroom signage, including handicap symbol where necessary, in compliance with ADA requirements.

2.3 Colors selected by Architect.

3. INSTALLATION

3.1 Toilet accessories shall be installed in strict accordance with the instructions of the manufacturer.

3.2 Toilet accessories shall be installed in strict accordance with the ADA requirements (handicap code) in all areas.

3.3 Items shall be installed plumb, straight and true.

3.4 Items shall be properly installed and shall be free of surface defects.

END OF SECTION 10 28 13