Project Manual

REPLACE GYMNASIUM BLEACHERS
PROJECT NO. 2648249

SOUTHWESTERN MIDDLE SCHOOL
605 W. NEW HAMPSHIRE AVENUE
DELAND, FLORIDA 32720

THE SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
200 NORTH CLARA AVENUE
DELAND, FLORIDA

ARCHITECT

Group 942 Architecture, P.A.
2730 Holiday Woods Drive
Kissimmee, Florida 34744
(407) 348-9424

ELECTRICAL

TAGS Engineering, LLC
1621 Katie Circle
Sanford, Florida 32771

DATE: 12/3/2025

REVISED:

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SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA

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Project Name: Replace Gymnasium Bleachers
VCS Project No.: 2648249

All references herein that conflict with processes, procedures, or other terms outlined in the Owner contracts, as associated with this Project, the Owner contracts shall take precedence.

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Note:
Project $200,000 or more, utilize the A101-2017 Standard Form of Agreement, A101-2017 Exhibit A and the A201-2017 General Conditions of the Contract (Standard Bid); project is less than $200,000 utilize the 625 Standard Form of Agreement (Proposals).

Specific documents listed above may not apply to this project. Select "N/A" for document(s) which do not apply to this project. ***Required: consult the Owner's Construction Project Manager in charge to make this determination.***

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ADVERTISEMENT FOR BID

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 630

NOTICE is hereby given that sealed bids for: *(Facility Name)* Southwestern Middle School, *(Project Name)* Replace Gymnasium Bleachers, VCS Project Number 2648249, will be received by the School Board of Volusia County Florida, until *(date)* 4/2/2026 at *(time)* 1:30 PM**,** in the Volusia County Schools Facilities Services Building, at which time all bids will be publicly opened and read aloud. Bids received after this time will not be accepted. Bids may be mailed or hand delivered to Volusia County Schools, Facilities Services, 3750 Olson Drive, Daytona Beach Florida 32124.

A MANDATORY PRE-BID CONFERENCE is scheduled for *(date)* 3/12/2026, *(time)* 11:00 AM at *(location)* Southwestern Middle School, 605 W. New Hampshire Avenue, DeLand, Florida 32720**. All bidders must attend**. The representative of each bidder shall be an authorized employee of the bidder and shall sign in accordingly.

Documents, including complete specifications, may be examined by appointment at the office of the Construction Project Manager of record at Facilities Services, 3750 Olson Drive, Daytona Beach Florida (386) 947-8786.

BID DOCUMENTS ARE AVAILABLE VIA THE VOLUSIA COUNTY SCHOOLS WEBSITE AT: https://www.vcsedu.org/facilities-design The documents are in PDF format and may be viewed, printed or saved to your computer.

A310 Bid Bond Included
(The following sentence applies if the A310 Bid Bond is included for this project) Bids must be accompanied by a bid bond, certified check or cashier's check in an amount equal to five (5) percent of the total bid.

Bidders for this project are required to hold a current Certificate of Prequalification issued by the School Board of Volusia County Florida at the time of bid opening. To pre-qualify contact Purchasing, 200 North Clara Avenue, DeLand Florida 32720; telephone (386)734-7190.

All bids shall be binding for a period of 60 calendar days from the date of bid opening or until School Board approval of the bid, whichever occurs first. The bid amount of the successful bidder, once approved by the School Board, shall not be subject to change or withdrawal.

All bids shall be subject to the provisions of the Solicitation, as defined in FAC Document 631, Instructions to Bidders. It is the sole responsibility of all bidders to fully comply with the provisions of the Solicitation during this bidding process.

The School Board reserves the right to reject any one or more bids as provided by law.

The School Board of Volusia County Florida

Ruben Colon, Board Chair

INSTRUCTIONS TO BIDDERS

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 631

TO BIDDERS: You are hereby invited to submit a sealed bid for the following project. Bids will be publicly opened and read aloud at the time and place designated. Bids received after this time will not be accepted.

1. PROJECT INFORMATION

FACILITY NAME:	SOUTHWESTERN MIDDLE SCHOOL
PROJECT NAME:	REPLACE GYMNASIUM BLEACHERS
PROJECT NUMBER:	2648249
OWNER:	THE SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
ARCHITECT:	GROUP 942 ARCHITECTURE, P.A.
BID DATE AND TIME:	4/2/2026; 1:30 PM
LOCATION:	Volusia County Schools Facilities Services Bid Conference Room 3750 Olson Drive Daytona Beach, Florida 32124 Phone: 386-947-8786

MANDATORY PRE-BID CONFERENCE

DATE AND TIME:	3/12/2026; 11:00 AM
LOCATION:	Southwestern Middle School 605 W. New Hampshire Avenue DeLand, Florida 32720

All Bidders must attend the pre-bid conference. The representative of each Bidder shall be an authorized employee of the Bidder and shall sign in accordingly.

CONSTRUCTION TIME:
Sixty-three (63) consecutive calendar days after written “Notice to Proceed”.

BID DOCUMENTS:

Documents, including drawings and specifications, may be examined at the office of:

By Appointment Only:
Group 942 Architecture, P.A.
2730 Holiday Woods Drive
Kissimmee, Florida 34744
(407) 348-9424 call for appointment.

Bid documents are available in digital format. Bidders may view, print or save copies of the bid documents via the Volusia County Schools website at: https://www.vcsedu.org/facilities-design
(Note: documents for proposals not published online.)

BID RESULTS:

The bid results will be available on the district web site at https://www.vcsedu.org/facilities-design
(Note: proposal results not published online.)

DIRECTIONS TO SCHOOLS AND FACILITIES

Directions to School Board of Volusia County schools and facilities are available via the district website at: https://www.vcsedu.org/community-information-services/maps-and-directions.

2. DEFINITIONS

2.1 **Contract**: *(select contract applicable to Project)*
☒ Standard Form Agreement between Owner and Contractor, AIA Document A101-2017, as modified by the Owner and General Conditions of the Contract for Construction, AIA Document A201-2017, as modified by the Owner.
☐ Standard Form of Agreement Between Owner and Contractor for a Small Project, FAC Document 625.

2.2 **Contractor**: The term Contractor as used in this Solicitation shall be defined as provided in Section 489.105(3), Florida Statutes (2003) and shall be licensed to perform that work and in direct contractual relationship with Owner.

2.3 **Bidder**: Contractor which has received a certificate of prequalification by the School Board in conformance with State Board of Education Rules and School Board Policy 604. Certificate of prequalification shall only entitle a Contractor to submit a bid and shall not constitute proof of Bidder's ability to perform a contract or serve as a substitute for any of the qualifications imposed on Contractor in the Solicitation.

2.4 **Lowest Responsible Bidder**: A Contractor who has the skills, qualifications, ability and experience to perform the contract, in all respects, as required by the Solicitation and who has submitted the lowest responsible bid.

2.5 **Non-responsive bid**: Shall include, but not be limited to, submission of a subcontractor without required licensing, submission of incomplete forms or documentation, failure to demonstrate the skills, qualifications, ability and experience to perform the contract as required by the Solicitation of both the Bidder and its subcontractor(s), or any other reason provided by law.

2.6 **Self-performance**: Performance of work by the Bidder in one or more of the types of work as disclosed under FAC Document 633, List of Subcontractors, which is undertaken and completed entirely by his own forces through the use of skilled and unskilled labor, supervision and equipment owned, operated and controlled by the Bidder without the assistance, employ, contract or reliance on any third parties, individual or corporate, except that a total of not more than 10% of the cost of performing the work, that is to be self-performed, may be expended to utilize outside sources to perform the work and then only when the third party assistance is so specialized as to be commonly employed in the industry as it is otherwise not economically reasonable to maintain it internally.

2.7 **School Board**: The School Board of Volusia County Florida. The term "Owner" may be used interchangeably.

2.8 **Solicitation**: Consists of the following documents: Project Manual, Advertisement for Bid, Drawings, Addenda. The term includes what is generally defined as "Invitation to Bid" and "Request for Proposals" in Section 287.012, Fla. Stat. (2003).

2.9 **Subcontractor**: Any person or entity under contract with a Contractor to provide services or labor for the construction, installation, or repair of an improvement of real property. For purposes of this Solicitation, this term does not include suppliers who provide only materials, equipment or supplies to a Contractor.

3. PREQUALIFICATION OF BIDDERS

The prequalification process and terms and conditions of certificates of prequalification shall be governed by Volusia County School Board Policy 604.

A Bidder's failure to hold a certificate of prequalification at the time of bid submittal shall result in the automatic rejection of that bid.

4. BID SUBMITTAL

Each Bidder, on or before the bid date and time specified above, shall sign and submit, to Volusia County Schools, Facilities Services, 3750 Olson Drive, Daytona Beach Florida 32124, one (1) original and one (1) copy of the FAC Document 632, Bid Form, of the Solicitation in the format provided herein, with all bid information completed and two (2) copies of all other required bid documentation. If bids are delivered by U.S. mail, or some other form of delivery other than hand-delivery, a return receipt may be requested. Submittals containing any condition, omissions, unexplained erasures, alterations, items not called for or irregularities of any kind may be rejected by the School Board. Any additions or deletions made before bid opening shall be made solely on FAC Document 632, Bid Form. Verbal or digital bid submittals will not be considered.

Each Bidder's submittal shall be placed in an envelope and sealed and marked with the name of the project. Required bid documents included with the Bid Form shall be assembled as follows: FAC Document 632 Bid Form, AIA Document A310 Bid Bond (if required for this project), Power of Attorney (if required for this project), FAC Document 633 List of Subcontractors and then any other documents required. Bid documents (original set and copy set) shall be stapled or paperclipped, binders of any kind as well as separation pages should not be used. Failure to submit any bid document or bid information with the bid, as specified, shall result in the bid being rejected as non-responsive.

The School Board expressly reserves the right to waive minor technicalities, and to use sufficient time to investigate the bids and the skills, qualifications, experience and ability of the Bidders and its subcontractor(s) to fully perform the contract requirements. Any refusal by a Bidder or subcontractor(s) to respond to the School Board's request for information shall deem a bid non-responsive and serve as grounds for rejection of the bid by the School Board. Any documentation requested by School Board during this investigation process shall not be deemed a supplement to a bid, but as part of its good faith investigation process. Any withdrawal of a subcontractor by a Bidder without good cause shown shall deem a bid non-responsive and serve as grounds for rejection of the bid by the School Board; however, in no event shall any substitution of a subcontractor result in an increase in the bid amount.

A Bidder's failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, shall constitute a waiver of the right to protest under Chapter 120, Florida Statutes, or by any other means.

Award of the contract will be made to the lowest responsible Bidder for the actual amount bid; however, the School Board reserves the right to reject all bids as provided by law.

All bids shall be binding for a period of 60 calendar days from the date of bid opening or until School Board approval of the bid, whichever occurs first. The bid amount of the successful Bidder, once approved by the School Board, shall not be subject to change or withdrawal.

5. AIA DOCUMENT A310, BID BOND - REQUIRED

If a Bid Bond is required, the Bid and Bid Bond must be accompanied by a certified check or cashier's check in an amount equal to five (5) percent of the total bid and shall be made payable to the "School Board of Volusia County Florida." The bond or check shall be irrevocable for 60 calendar days from the date of bid opening or until School Board approval of the bid, whichever occurs first.

All Bidders shall submit one (1) copy of the Bid Bond on form AIA Document A310 Bid Bond. Surety companies providing Bidders' bonds shall be licensed to operate in the State of Florida and shall be rated "excellent" or better by Best Insurance Rating Guide. The bond shall be signed or countersigned by a

Florida Resident Agent. You must provide a signed Power of Attorney for each copy of the bond. A Bidder may, at its option, submit a certified check from a Florida bank or a cashier's check as bid security, original and one photostat copy required.

6. SUBCONTRACTOR DISCLOSURE

Bidders shall furnish, on the FAC Document 633, List of Subcontractors form, a full disclosure of subcontractors to be utilized on the project or a clear representation of the Bidder's intent to self-perform the work, as defined, as an attachment to FAC Document 632, Bid Form.

7. EXAMINATION OF SITE

Bidders are required to visit the construction site, prior to bidding, compare the Drawings and Specifications with any work in place and inform themselves of all conditions thereof. Failure to visit site will in no way relieve the successful Bidder from furnishing materials or performing any work necessary to complete the project in accordance with the contract documents, and specifications.

8. ADDENDA

Only those Contractors who attend the mandatory pre-bid meeting will be notified via email of the issuance of Addenda for this project. All addenda will be published on the Owner's website.
(Note: addenda for proposal projects not published online.)

9. PUBLIC ENTITY CRIME INFORMATION STATEMENT

All invitations to bid as defined by Section 287.012(11), Florida Statutes, requests for proposals as defined by Section 287.012(16), Florida Statutes, and any contract document described by Section 287.058, Florida Statutes, shall contain a statement informing persons of the provisions of paragraph (2)(a) of Section 287.133, Florida Statutes, which reads as follows:

> "A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases or real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list."

10. BID PROTEST BOND

As a condition precedent to filing a bid protest pursuant to Section 120.57(3)(f), Florida Statutes, a protestor shall post a bid protest bond consistent with Section 255.0516, Florida Statutes Any failure by a protestor to file a bid protest bond with the School Board at the time of filing a bid protest shall result in a dismissal with prejudice of the protest for failure to comply with Section 255.0516, Florida Statutes All bid protests must be accompanied by a bid protest bond in the form provided herein and a certified check or cashier's check in an amount consistent with that identified in Section 255.0516(1) or (2), Florida Statutes for this project.

11. CONTRACTOR ACKNOWLEDGMENT FORM

The successful Contractor shall submit an executed Contractor Acknowledgment Form (included in these specifications) to Facilities Services before work begins. On this form the Contractor acknowledges that it has been given access to and has read the asbestos survey, management plan, re-inspection report (if applicable) and/or the certificate of final inspection (if applicable) for the school it will be working in. Further, it acknowledges that the Contractor must cease work and notify the project manager and asbestos program manager in the event of encountering materials not previously identified by the aforementioned reports.

This document must be submitted with the executed contract documents.

12. CONTRACT

The successful Bidder shall execute the Contract for the amount as submitted by the Bidder and approved by the School Board, within ten (10) working days after written notification of acceptance. A binding contract exists upon the issuance of the School Board's Notice of Acceptance of Bid.

The terms and conditions of this Solicitation shall prevail over any other conflicting language until the award of the contract to the lowest responsible Bidder and issuance of the School Board's Notice of Acceptance of Bid.

13. FAC DOCUMENT 640, PERFORMANCE AND PAYMENT BOND - REQUIRED

If a Performance and Payment is required, the successful Bidder shall submit four (4) signed copies of a Performance and Payment Bond from a surety insurer authorized to do business in the State of Florida equal to one hundred percent (100%) of the total contract amount. The School Board's standard Bond Form, included herein, shall be used to submit the information. The Performance and Payment Bond shall be submitted simultaneously with the execution of the Contract. The Performance and Payment Bond shall be subject to the provisions of Section 255.05, Florida Statutes, and shall not expire until one (1) year after the date of the Certificate of Final Payment. The Performance and Payment Bond shall be executed on the same day as the Contract and shall include a Power of Attorney for each copy of the Bond.

14. LIQUIDATED DAMAGES

The parties acknowledge the School Board will suffer damages if the project has not reached Substantial Completion and Final Completion on the dates set forth in the Contract. The damages suffered by the School Board, in the event of a delay, are not readily ascertainable. Due to the difficulty in ascertaining the damages, the Contractor and the Contractor's surety shall be liable for and shall pay, as liquidated damages, the sum of One Hundred Fifty dollars and no cents ($150.00) per calendar day for each calendar day or part thereof, the delay in the project continues beyond the deadline set by the terms of the Contract for Substantial Completion of the work. The parties acknowledge that these sums are not a penalty, but are the amount agreed upon by the parties as liquidated damages representing the losses to the School Board which would be incurred in the event the project is delayed by the Contractor beyond the date of Substantial Completion and the date of Final Completion as set forth in the Contract.

15. TIME OF THE ESSENCE

Any time periods provided for herein which shall end on a Saturday, Sunday, or a legal holiday shall extend to 5:00 p.m. of the next business day. Time is of the essence in this Contract.

BID FORM

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 632

TO: School Board of Volusia County Florida
Facilities Services
3750 Olson Drive, Daytona Beach Florida 32124
(386) 947-8786

The undersigned, having become familiarized with the local conditions affecting the cost of the work and with the Drawings and Specifications as prepared by Group 942 Architecture, P.A. hereby submits the following bid / proposal:

Facility Name: Southwestern Middle School
Project Name: Replace Gymnasium Bleachers
VCS Project No.: 2648249

COMPANY NAME: _____
ADDRESS: _____
PHONE: _____

I (We) propose to furnish all labor, materials, equipment and services necessary for the completion of the above project, all in accordance with the Drawings and Specifications hereof, including any addenda issued, as indicated below.

BASE BID
Note: modify the format in the box below as needed for this project.

As shown on the drawings and specifications, the sum of:
_____ ($_____).

ALTERNATES - As described below.
(Note: A/E insert description below; add additional Alternates as needed.)

ALTERNATE NO.1: Strip and Paint the Underside of the Existing Continuous Roof Deck Support Angle at the North and South Walls of the Existing Gymnasium Building, Room 5.001.
If the owner elects to proceed with Alternate No. 1, as described in the Contract Documents:
☐ add / ☐ deduct _____
($_____).

UNIT PRICES - No unit prices for this project.
(Note: A/E insert description below; add additional Unit Prices as needed.)

UNIT PRICE A: *(insert description here)*
If the owner elects to proceed with Unit Price A, as described in the Contract Documents:
☐ add / ☐ deduct _____
($_____) per _____.

BID SECURITY - REQUIRED
If required, bid security in an amount equal to 5% of the total bid proposal is enclosed with the understanding that this proposal shall remain in full effect for a period of 60 days starting at the bid opening date and time.

The undersigned agrees to commence work under the Contract on or before a date to be specified in the written FAC Document 650 Notice to Proceed, and to substantially complete the project within Sixty-three (63) consecutive calendar days thereafter, as specified in Article 3 of AIA Document A101-2017 Agreement, or Article 2 of FAC Document 625 Agreement, which ever is applicable to this project.

The Bidder acknowledges the following addendum (addenda) is made an integral part of the bid documents:

Addendum No.	Date Issued	Addendum No.	Date Issued

In submitting this bid / proposal, the Bidder acknowledges this bid / proposal is based on all construction documents and addenda as posted on the Owner's website or otherwise provided by the Owner's representative. The Owner reserves the right to accept or reject any or all bids / proposals and is not obligated to accept the lowest responsible bid / proposal.

OFFICIAL COMPANY NAME AND ADDRESS:

_____ By: _____
(Signature)

_____

_____ _____
(Print Name, Title)

_____

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, legal status and address)

BOND AMOUNT: $

PROJECT:
(Name, location or address, and Project number, if any)

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

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User Notes:

Signed and sealed this day of ,

	(Contractor as Principal) *(Seal)*
(Witness)	*(Title)*
	(Surety) *(Seal)*
(Witness)	*(Title)*

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User Notes:

LIST OF SUBCONTRACTORS

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 633

Bidder Company Name:	
Facility Name:	Southwestern Middle School
Project Name:	Replace Gymnasium Bleachers
VCS Project Number:	2648249

This form shall be considered an integral part of FAC Document 632, Bid Form, and shall be submitted with the Bid Form.

The term Subcontractor as used herein shall be used as defined in FAC Document 631, Instructions to Bidders.

For each "TYPE OF WORK" listed below, list the name of the subcontractor who will be performing any portion of that work. Use additional sheets, if needed.

Bidder may list itself to self-perform, as defined in FAC Document 631, Instructions to Bidders, a type of work when the Bidder is currently licensed to and shall perform that type of work and provides completed FAC Document 634, Bidder Project Data for Self-Performed Projects, within five (5) days to the date of this bid, for at least two (2) previously self-performed projects of comparable size and scope of this Contract for the last five (5) years.

There shall be no exceptions to a Bidder's obligation to provide the aforementioned documentation in the time frame provided. Failure to provide any of the aforementioned documentation or comply with the requirements of this form shall constitute a material deviation from the requirements of this Solicitation and shall serve as grounds for rejecting the bid as non-responsive.

(Consultant: modify the list of work in the table below as needed for the Project.)

TYPE OF WORK	SUBCONTRACTOR
1. Selective Demolition	
2. Cutting and Patching	
3. Joint Sealants	
4. Painting	
5. Telescoping Bleachers	
6. Electrical	

BIDDER PROJECT DATA
FOR SELF-PERFORMED PORTIONS OF THE WORK

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 634

Facility Name: Southwestern Middle School
Project Name: Replace Gymnasium Bleachers
VCS Project No.: 2648249

Instructions to Bidder: Work completed in the past 5-years. For each type of work proposed to be self-performed by Bidder in FAC Document 633 of the Solicitation, provide full responses to this form. In the event Bidder requires additional space, Bidder is authorized to reproduce this form.

Submitted by - Firm Name: _____

Firm Address: _____

Self-performed Project No. 1

Project: _____

A. Type of Work: _____

Description: _____ Date Completed: _____

Location: _____

Value of Self-performed Work: _____ Total Project Value: _____

B. Owner: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

C. Arch. or Eng.: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

Self-performed Project No. 2

Project: _____

A. Type of Work: _____

Description: _____ Date Completed: _____

Location: _____

Value of Self-performed Work: _____ Total Project Value: _____

B. Owner: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

C. Arch. or Eng.: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

Self-performed Project No. 3

Project: _____

A. Type of Work: _____

Description: _____ Date Completed: _____

Location: _____

Value of Self-performed Work: _____ Total Project Value: _____

B. Owner: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

C. Arch. or Eng.: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

Self-performed Project No. 4

Project: _____

A. Type of Work: _____

Description: _____ Date Completed: _____

Location: _____

Value of Self-performed Work: _____ Total Project Value: _____

B. Owner: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

C. Arch. or Eng.: _____

Contact Person(s): _____ Phone: _____

Email: _____

Office Address: _____

The foregoing is a statement of fact. Any inaccurate information disclosed in this form shall constitute a major deviation from the Solicitation and result in the rejection of bid as non-responsive to the requirements of the Solicitation.

_____ _____

Print Name *Title*

_____ _____

Signature *Date*

TRENCH SAFETY ACT FORM

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 635

Facility Name: Southwestern Middle School
Project Name: Replace Gymnasium Bleachers
VCS Project No.: 2648249

This form shall be completed, signed and submitted with FAC Document 632, Bid Form. Failure to submit this form at the time of bid will constitute automatic disqualification and non-acceptance of bid proposal.

The undersigned, herein called "Bidder", has determined to his own complete satisfaction that all portions of the Florida Trench Safety Act (90-96, Laws of Florida) as the OSHA Excavation Safety Standards 29, CFR part 1926.650 Subpart P, will be fully complied with and executed properly on this project.

Bidder acknowledges that included in the various items of the proposal and in the Total Bid Price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) effective October 1, 1990. The bidder further identifies the costs to be summarized below:

	Trench Safety Measure (Description)	Units of Measure (LF, SY)	Unit (Quantity)	Unit Cost	Extended Cost
A.					
B.					
C.					
D.					
				Total	

In Witness whereof, the Bidder as hereunto set his signature and affixed his seal

this _____ day of _____ in the year _____

Firm: _____ *(SEAL)*

By: _____

Name and Title: _____

BID PROTEST BOND

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 636

Bond Number:
Facility Name: I
Project Name:
VCS Project No.:

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____ a *(select one)* ☐ corporation ☐ joint venture ☐ partnership ☐ proprietorship ☐ limited liability company organized and existing under the laws of the State of _____, and duly authorized to do business in the State of Florida and having its principal place of business at _____ as PRINCIPAL; and _____, a surety company, organized under the laws of the State of _____, and duly authorized to do business in the State of Florida, whose principal place of business is _____ as SURETY, are held and firmly bound unto the School Board of Volusia County Florida as OBLIGEE in the amount of _____ Dollars ($_____) for the payment of which sum we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally.

THIS BOND is issued under provisions of Section 255.0516, Florida Statutes. The above-named principal has initiated an administrative protest pursuant to Section 120.57, Florida Statutes, regarding the School Board of Volusia County's (Board) bid solicitation, bid rejection or contract award for the above-referenced project, which protest is conditioned upon the posting of a bond. The bond shall be conditioned upon the payment of all costs and attorneys' fees which may be adjudged against the person filing the protest in the administrative hearing in which the action is brought and any subsequent appellate court proceeding.

NOW, THEREFORE, if the Principal, after conclusion or termination of the administrative hearing process, and/or any appellate court proceedings regarding the protest, shall satisfy all attorneys' fees, costs and interest thereon, rendered by final order and/or judgment, in favor of the Board as the prevailing party, then the obligation shall be null and void; otherwise this bond shall remain in full force and effect.

The Board may bring an action in a proper court on this bond for the amount of such liability, including all additional costs and attorneys' fees associated with a claim against the bond.

PRINCIPAL _____

BY _____

TITLE _____ (CORPORATE SEAL)

ATTEST _____

TITLE _____

SURETY _____

BY _____ (CORPORATE SEAL)

TITLE _____

Florida Licensed Insurance Agent _____

NOTE: Power of attorney showing authority of Surety's agent or Attorney in fact must be attached.

AIA Document A101 – 2017

Standard Form of Agreement Between Owner and Contractor
where the basis of payment is a Stipulated Sum

AGREEMENT made as of the _____ day of _____ in the year _____.
(In words, indicate day, month, and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

School Board of Volusia County Florida
200 North Clara Avenue, DeLand Florida 32720

Document mailing address: 3750 Olson Drive, Daytona Beach Florida 32124

and the Contractor:
(Name, legal status, address and other information)

_____

for the following Project:
(Name, location and detailed description)

_____

The Architect:
(Name, legal status, address and other information)

_____

The Owner and Contractor agree as follows.

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TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

6 DISPUTE RESOLUTIONS

7 TEMINATION OR SUSPENSION

8 MISCELLANEOUS PROVISIONS

9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONSTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9. Contract documents include the Contractor's bid or proposal.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1. The date of commencement of the Work shall be:

[ ] The date of this Agreement.

[X] A date set forth in a notice to proceed issued by the Owner.

[ ] Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

_____

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

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§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
(Check one of the following boxes and complete the necessary information.)

[X] Not later than _____ (_____) consecutive calendar days from the date of commencement of the Work.

[ ] By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be _____ ($ _____), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

~~§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.~~
~~*(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)*~~

~~Item~~	~~Price~~	~~Conditions of Acceptance~~

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

The parties acknowledge the Owner will suffer damages if the project has not reached Substantial Completion and Final Completion on the dates set forth in the Contract. The damages suffered by the Owner, in the event of a delay, are not readily ascertainable. Due to the difficulty in ascertaining the damages, the Contractor and the Contractor's surety shall be liable for and shall pay, as liquidated damages, the sum of _____ dollars _____ cents ($_____) per calendar

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day for each calendar day or part thereof, the delay in the project continues beyond the deadline set by the terms of the Contract for Substantial Completion of the work. The parties acknowledge that these sums are not a penalty, but are the amount agreed upon by the parties as liquidated damages representing the losses to the Owner which would be incurred in the event the project is delayed by the Contractor beyond the date of Substantial Completion as set forth in the Contract. Time is of the essence. Any such liquidated damages may, at the option of the Owner, be withheld and deducted from any unpaid portion of the Contract sum.

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

_____

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Document.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

_____

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the first day of a month and certified to the Owner by the seventh day of the month, the Owner shall make payment of the amount certified to the Contractor not later than the last day of the same month. If an Application for Payment is received by the Architect and certified to the Owner after the application date fixed above, payment of the amount certified shall be made by the Owner not later than thirty (30) days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect and Owner may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment. The Contractor shall not make changes in the Schedule of Values without prior approval of the Architect and Owner.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

.1 That portion of the Contract Sum properly allocable to completed Work;

.2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing.~~; and~~

~~.3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.~~

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and

.5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Retainage, not to exceed five percent (5%), shall be withheld from each progress payment to the Contractor for Projects with a total cost of construction services identified in the contract of more than two hundred thousand dollars ($200,000.00), 218.735 F.S.

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

_____

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

_____

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

_____

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 applicable for Final Payment along with all warranties, guarantees, close out documents including all as built drawings in paper document and digital combined PDF format, transmitted via FTP or other Owner accepted protocol, and items required under the Contract Documents as submitted to the Architect or Engineer for review and transmittal to the Owner; and

.3 Board acceptance of the Certificate of Final Inspection (CFI); and

.4 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made ~~no later than~~ 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

_____

~~§ 5.2 Interest~~
~~Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.~~
~~*(Insert rate of interest agreed upon, if any.)*~~

ARTICLE 6 DISPUTE RESOLUTION
§ 6.1 Initial Decision Maker
The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017~~, unless the parties appoint below another individual, not party to this Agreement, to serve as the Initial Decision Maker~~.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

_____

§ 6.2 Binding Dispute Resolution
For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[ ] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[X] Litigation in a court of competent jurisdiction

[ ] Other *(Specify)*

_____

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION
§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

~~§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:~~
~~*(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)*~~

_____

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS
§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

_____

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

_____

§ 8.4 ~~Neither the Owner's nor the Contractor's representative shall be changed without ten days prior notice to the other party.~~ The Contractor's representative shall not be changed without prior written approval by the Owner.

§ 8.5 Insurance and Bonds
§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Other provisions:

_____

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS
§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
.3 AIA Document A201™–2017, General Conditions of the Contract for Construction

.4 Drawings

Exhibit	Title	Date
B	List of Drawings	

.5 Specifications

Exhibit	Title	Date
C	List of Specifications	

.6 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.7 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

Supplemental and other Conditions of the Contract:

_____

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.8 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

_____

This Agreement entered into as of the day and year first written above.

School Board of Volusia County Florida _____

OWNER *(Signature)*	CONTRACTOR *(Signature)*
, Board Chair *(Printed name and title)*	*(Printed name and title)*
WITNESS *(Signature)*	WITNESS *(Signature)*
, Superintendent *(Printed name and title)*	*(Printed name and title)*

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Exhibit A – Insurance and Bonds
to AIA Document A101 – 2017 Agreement

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the _____ day of _____ in the year _____.
(In words, indicate day, month, and year.)

for the following PROJECT:
(Name and location or address)

_____

THE OWNER:
(Name, legal status and address)

School Board of Volusia County Florida
200 North Clara Avenue, DeLand Florida 32720

Document mailing address: 3750 Olson Drive, Daytona Beach Florida 32124

THE CONTRACTOR:
(Name, legal status and address)

_____

TABLE OF ARTICLES

A.1 GENERAL

A.2 OWNER'S INSURANCE

A.3 CONTRACTOR'S INSURANCE AND BONDS

A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™–2017, General Conditions of the Contract for Construction. The Owner, at its discretion, may modify this document at any time during the preparation of the Contract to conform to the Project.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under ~~this Article~~ Section A.2.2 and, upon the Contractor's request, provide a copy of the ~~property~~ insurance policy or policies required ~~by Section A2.3~~. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability and Property Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability and property insurance.

§ A.2.3 Required Property Insurance

§ A.2.3.1 ~~Unless this obligation is placed on the~~ The Contractor, pursuant to Section A.3.3.2.1, ~~the Owner~~ shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The ~~Owner's~~ Contractor's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:
(Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss	Sub-Limit

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:
(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage	Sub-Limit

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the ~~Owner~~ Contractor shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the ~~Owner~~ Contractor shall be responsible for all loss not covered because of such deductibles or retentions. Deductibles in excess of $50,000 shall not be permitted.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the ~~Owner~~ Contractor shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Contractor shall be responsible for all co-insurance penalties.

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§ A.2.4 Optional Extended Property Insurance.
The ~~Owner~~ Contractor shall purchase and maintain the insurance selected and described below.
(Select the types of insurance the ~~Owner~~ Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

[ ] § 2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

[X] § 2.4.2 Ordinance or Law Insurance, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

[ ] § 2.4.3 Expediting Cost Insurance, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

[ ] § 2.4.4 Extra Expense Insurance, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

[ ] § 2.4.5 Civil Authority Insurance, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

[ ] § 2.4.6 Ingress/Egress Insurance, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

[ ] § 2.4.7 Soft Costs Insurance, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

§ A.2.5 Other Optional Insurance.
The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

[X] § 2.5.1 Cyber Security Insurance for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. *(Indicate applicable limits of coverage or other conditions in the fill point below.)*

[ ] § 2.5.2 Other Insurance
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage	Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending coverage or limits. Failure of the contractor to obtain and maintain required insurance shall be grounds for termination of the Contract by the Owner. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured, including a copy of the additional insured form attached to the certificate of insurance, on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies. Umbrella excess liability shall be provided for Projects with a contract sum in excess of one million dollars ($1,000,000); not less than one million dollars ($1,000,000) over primary insurance; and retention for self-insured hazards for one million dollars ($1,000,000).

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. The Contractor, for your Work, shall maintain completed operations coverage for itself and each additionally insured for at least five (5) years or the Florida Statute of Repose whichever is greater. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies, rated by A.M. Best "A-" or better, lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.2.2 Commercial General Liability

§ 3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than one million dollars ($1,000,000) each occurrence, one million dollars ($1,000,000) per claimant, two million dollars ($2,000,000) general aggregate, and two million dollars ($2,000,000) aggregate for products-completed operations hazard, providing coverage for claims including

.1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;

.2 personal injury and advertising injury;

.3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;

.4 bodily injury or property damage arising out of completed operations; ~~and~~

.5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions;

.6 contractual liability for bodily injury and property damage not less than one million dollars ($1,000,000) per claimant and each occurrence; and for property damage two million dollars ($2,000,000) general aggregate; and

.7 property damage liability shall provide X, C and U coverage.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

.1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.

.2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.

.3 Claims for bodily injury other than to employees of the insured.

.4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.

.5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.

.6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.

.7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.

.8 Claims related to roofing, if the Work involves roofing.

.9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.

.10 Claims related to earth subsidence or movement, where the Work involves such hazards.

.11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ 3.2.3 Automobile Liability covering vehicles owned, hired, leased and non-owned vehicles used, by the Construction Manager, with policy limits of not less than one million dollars ($1,000,000) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage. The Owner is to be named as additionally insured. The State of Florida has no-fault automobile insurance requirements; the Contractor shall be certain coverage is provided which conforms to any specific stipulation in this law.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

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§ A.3.2.5 Workers' Compensation at State, Chapter 440 Florida Statutes, and Federal, e.g. Longshoremen's Statute, statutory limits with policy limits not less than one million dollars ($1,000,000.00) each accident, each employee and policy limit.

§ A.3.2.5.1 In the event the Contractor is using leased employees (PEO arrangement), provide the same workers' compensation policy limits as Section 3.2.5; and a waiver of subrogation in favor of alternate employers' endorsement showing the subcontractor as the alternate employer.

§ 3.2.6 Employers' Liability with policy limits not less than one million dollars ($1,000,000) each accident, one million dollars ($1,000,000) each employee, and one million dollars ($1,000,000) policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks.

§ 3.2.8 If the Construction Manager is required to furnish professional services as part of the Work, the Construction Manager shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than one million dollars ($1,000,000) per claim and one million dollars ($1,000,000) in the aggregate.

§ 3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Construction Manager shall procure Pollution Liability insurance, with policy limits of not less than one million dollars ($1,000,000) per claim and one million dollars ($1,000,000) in the aggregate.

§ 3.2.10 Coverage under Sections 3.2.8 and 3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than _____ ($ _____) per claim and _____ ($ _____) in the aggregate.

§ 3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than _____ ($ _____) per claim and _____ ($ _____) in the aggregate.

§ 3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than _____ ($ _____) per claim and _____ ($ _____) in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:
(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ 3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section 3.3.1.
(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

[X] § 3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance ~~except insurance required by Section A.2.3.1.3 and Section A.2.3.3~~. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle

the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below.
(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

[ ] § 3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than _____ ($ _____) per claim and _____ ($ _____) in the aggregate, for Work within fifty (50) feet of railroad property.

[ ] § 3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than _____ ($ _____) per claim and _____ ($ _____) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

[X] § 3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site, including scaffolding and other equipment used on the Project, on an "all-risks" completed value form.

[ ] § 3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Construction Manager and used on the Project, including scaffolding and other equipment.

[ ] § 3.3.2.6 Other Insurance
(List below any other insurance coverage to be provided by the Construction Manager and any applicable limits.)

Coverage **Limits**

§ A.3.4 Performance Bond and Payment Bond
§ A.3.4.1 The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located~~, as follows:~~.
~~*(Specify type and penal sum of bonds.)*~~

~~Payment and Performance Bonds shall be AIA Document A312, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312, current as of the date of this Agreement.~~

§ A.3.4.2 Unless otherwise agreed in writing prior to beginning Work, the Contractor shall furnish and pay for a Performance and Payment Bond on the Project in the amount of one-hundred percent (100%) of the Contract Price. The liability under said Bond shall be coextensive with the Contractor for all damages arising out of Contractor's breach of this agreement or failure to perform, including, but not limited to, delay damages, liquidated damages (if any), completion of punch lists and the Contractors responsibilities under Section 12.2.2.1 of the General Conditions. "Conditional" Payment Bonds under Florida Statutes, Section 713.245, shall not be acceptable. Proper Power of Attorney shall accompany said bonds.

§ A.3.4.3 The Contractor shall provide a Public Construction Bond as required by 255.05 F.S.; the Performance and Payment Bonds shall be on forms provided and approved by the Owner.

§ A.3.4.4 Bonds shall be secured through sources acceptable to the Owner. To be acceptable to the Owner as Surety for Performance and Payment Bonds, a Surety Company shall comply with the following provisions:

.1 the Surety Company must be authorized to do business in the State of Florida; and
.2 the Surety Company shall have been in business and have a record of successful continuous operations for at least five years; and

.3 the Surety Company shall have at least A.M. Best Company Policyholder's Rating of "A-" and "Financial Size Category" of class XI or an equivalent rating from the Insurance Commissioner if not rated by A.M. Best.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

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AIA Document A201 – 2017

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

_____

THE OWNER:
(Name, legal status and address)

School Board of Volusia County Florida
200 North Clara Avenue, DeLand Florida 32720

Document mailing address: 3750 Olson Drive, Daytona Beach Florida 32124

THE ARCHITECT:
(Name, legal status and address

_____

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

All references herein to "Contractor" shall mean "Construction Manager" for Construction Management contract Projects in lieu thereof. The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (A201-2017 General Conditions of the Contract as modified by Owner hereinafter "A201-2017", Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, ~~(3) a Construction Change Directive,~~ or (3) a written order for a minor change in the Work issued by the Architect. ~~Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.~~

§ 1.1.2.1 Three (3) original Contract documents shall be signed by both parties with one (1) signed document delivered to Contractor after Owner approval.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Architect ~~Initial Decision Maker~~ is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.1.9 Third Party Beneficiary

Nothing contained in the Contract Documents shall create a contractual relationship between the Owner and any third party; however, it is understood and agreed that the Owner is an intended third-party beneficiary of all contracts for design or engineering services, all subcontracts, purchase orders as well as all agreements between the Contractor and third parties. The Contractor shall incorporate the obligations of this Contract into its respective subcontracts, supply agreements and purchase orders.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended ~~indicated~~ results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 The term "Provide", as used in the Contract Documents, includes furnishing all labor, supervision, tools, materials, supplies, equipment, shop drawings, product data and samples, together with all services, accessories and costs associated with performance of the work, for production of an item or system usable in the completed project.

§ 1.2.5 Where conflict or discrepancies exists within or between the Contract Documents or between the Contract Documents and applicable industry standards or applicable codes, ordinances, or other legal requirements, the more stringent requirements shall apply; otherwise, the following order of precedence shall be used.

.1 The Agreement
.2 Supplementary Conditions, if any
.3 These General Conditions
.4 Addenda, if any, with those of later date having precedence over those of earlier date
.5 Specifications
.6 Drawings

§ 1.2.6 Any organization's document referred to, unless otherwise specified in the Specifications, shall mean the latest edition of such document adopted and published prior to the date of the Specifications, and such documents shall be a part of the Specifications with the same effect as if written therein in full.

§ 1.2.7 Dimensions indicated on any Drawings are required dimensions, regardless of measurement per given scale. The Contractor shall verify at the Site necessary levels, measurements, etc., for proper and complete fabrication, assembly and installation of Work. Where dimensions are not indicated, and exact location is not apparent, the Contractor shall notify the Owner and Architect. Inadvertent discrepancies or omissions of details, figures or notes on one drawing, where another drawing correctly sets forth such information, shall not be cause for additional charges or claims.

§ 1.2.8 The interrelation of the Specifications, the Drawings and the Schedules is as follows: The Specifications determine the nature of the setting of the various materials; the Drawings establish the quantities, dimension and details; and the Schedules give the locations. Should the Drawings disagree in themselves, or with the Specifications, the better quality or greater quantity of work or materials shall be estimated upon and, unless otherwise ordered by the Architect in writing, shall be performed or furnished. Explanatory notes on Drawings take precedence over Specifications. Figures given on Drawings take precedence over scaled measurements, and large-scale details take precedence over small Drawings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 Unless otherwise provided in the Owner's Agreement with the Architect, the Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.6.3 Written notice requirements of this Contract imposed upon the Contractor shall be strictly construed and such requirements are a condition precedent to Contractor pursuing any rights or remedies hereunder. Contractor expressly waives its rights to claim any waiver by the Owner of such notice requirements based upon the Owner having actual knowledge, implied, verbal or constructive notice, suffering lack of prejudice or any other grounds as substitute for the failure of the Contractor to comply with the express written notice requirements herein.

§ 1.7 Digital Data Use and Transmission

§ 1.7.1 The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. ~~The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.~~

§ 1.7.2 The Owner, at its discretion and direction, intends to utilize Procore Construction Management software platform which is licensed to the Owner. Access to the platform shall be provided to the Contractor at no cost to the Contractor.

- .1 The Procore Certification Program, as applicable to the Contractor's software access, shall be provided to those deemed necessary by the Contractor and Owner for the Project. The program is a self-paced webinar format intended to familiarize the user with the software. Time will be allotted to the Contractor for this purpose.
- .2 The Contractor shall perform the following:
  - .1 upload pertinent documents and files within the Procore software as established by the Owner; and
  - .2 utilize Procore Tools to manage specific data based documents and information; and
  - .3 collaborate and communicate with the Owner and Consultants within the Procore software; and
  - .4 modify the drawings within the Procore software throughout the Project in order to create as built drawings; and

.5 other Owner assigned and/or required Procore software processes necessary for the successful completion of the Project.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model ~~and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form,~~ shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 1.9 Public Records Compliance

§ 1.9.1 If the Contractor has questions regarding the application of Chapter 119, Florida Statutes, to the Contractor's duty to provide public records relating to this contract, contact the Custodian of Public Records at (386) 734-7190 extension 20119, custserv@volusia.k12.fl.us or 200 North Clara Avenue, DeLand Florida 32720. The Contractor shall:

.1 Keep and maintain public records required by the school district to perform the service; and

.2 Upon request from the school district's custodian of public records, provide the school district with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter or as otherwise provided by law; and

.3 Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the school district; and

.4 Upon completion of the contract, transfer, at no cost, to the school district all public records in possession of the Contractor or keep and maintain public records required by the school district to perform the service. If the Contractor transfers all public records to the school district upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the school district, upon request from the school district's custodian of public records, in a format that is compatible with the information technology systems of the school district.

§ 1.9.2 Failure of the Contractor to abide by the terms of this provision shall be deemed a material breach of this agreement and the School District of Volusia County may enforce the terms of this provision in the form of a court proceeding and shall, as a prevailing party, be entitled to reimbursement of all attorney's fees and costs associated with that proceeding. This provision shall survive termination or expiration of the contract.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Owner" means the Owner or the Owner's authorized representative, who shall be the Superintendent or designee. The Owner's Representative is authorized to act on the Owner's behalf as provided herein and in applicable law, regulation or ordinance. The Owner's Representative has the authority to reject unsatisfactory work and to stop the work if necessary to ensure its proper execution. Failure of the Owner's Representative, in any one or more instances, to insist on strict performance of any of the terms of the Contract or to exercise any option herein conferred shall not be construed as a waiver or relinquishment of future insistence of any such terms or options. ~~Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.~~

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information

shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information. ~~Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.~~

~~§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.~~

~~§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.~~

~~§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.~~

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner ~~shall~~ may, at Owner's sole discretion, retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner ~~shall~~ may employ a successor ~~to whom the Contractor has no reasonable objection and~~ whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys to the extent available to the Owner, without being responsible for the accuracy of completeness of same, describing physical characteristics, legal limitations and utility locations for the site of the

Project, and a legal description of the site. ~~The Contractor shall be entitled to rely on the accuracy of such survey information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.~~

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

§ 2.4.1 If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. The Owner shall incur no liability for delays occasioned by any stop-work order issued in accordance with this paragraph.

§ 2.4.2 If, after consultation with the Architect, suspension of the Work is warranted by reason of unforeseen conditions which may adversely affect the quality of the Work if such Work were continued, the Owner may suspend the Work by written notice to the Contractor. In such event, the Contract Time shall be adjusted accordingly, and the Contract Sum shall be adjusted to the extent, if any, that additional costs are incurred by reason of such suspension. If the Contractor, in its reasonable judgment, believes that a suspension is warranted by reason of unforeseen circumstances which may adversely affect the quality of the Work if the Work were continued, the Contractor shall immediately notify the Owner and the Architect of such belief and describe with particularity the reasons therefor.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ~~five~~ ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, ~~correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect~~ commence and continue to carry out the Work. The Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. ~~If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.~~ The right of Owner to stop the Work pursuant to this Section 2.5 shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

ARTICLE 3 CONTRACTOR

§ 3.1. General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become ~~generally~~ familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents. Familiarity with local conditions shall include, without limitation, (1) the condition and layout of the Project site and surrounding locale, (2) available labor supply and costs, (3) available subcontractors and suppliers, (4) the prevailing climate, including the impact of rain and saltwater environment, (5) available material and equipment and costs, and (6) other similar issues. Extra payments will not be authorized for Work that could have been foreseen by careful examination of the Site. Execution of the Contract shall constitute acceptance, by the Contractor, of existing Site conditions as a part of the requirements for this Work, except as to concealed and unknown conditions as provided in Section 3.7.4. Contractor shall make no claim for additional time or money based upon its failure to comply with this Paragraph.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention and in accordance with all local and Florida licensing requirements and Florida Building Code. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors. The Contractor agrees to remove from the Project any employee, Subcontractor, or Subcontractor employee that commits any breach of the Contract Documents or any breach of the Owner's written rules and regulations regarding jobsite conduct.

§ 3.3.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall require all construction personnel to maintain a neat general appearance at all times. Shirts, trousers and proper shoes are required apparel. The display of vulgar words, signs or figures is prohibited. Sandals and flip-flops are prohibited on the Project site. The use of radios, sound producing devices and the like are prohibited on the Project site. The Contractor shall not be permitted to use restrooms or other sanitary facilities within the Owner's existing buildings or on-site facilities.

§ 3.3.4 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work. Neither the presence or absence of the Owner or Architect shall relieve the Contractor from any requirements of the Contract Documents.

§ 3.3.5 The Contractor will be responsible for all building grades, lines, levels, etc., required for layout of the Work.

§ 3.3.6 If required by Owner on a Project where applicable, at the earliest possible time after the commencement of the Work on the Project site, the Contractor shall have all property corners and benchmarks verified or established by a state-licensed land surveyor, shall locate the Project on the Project site, establishing necessary reference marks and axes from which the Work accurately can progress, shall furnish Architect evidence of such verification and shall report at once any errors discovered during the process of such verification.

§ 3.3.7 If any of the Work is required to be inspected or approved by any public authority, the Contractor shall cause such inspection or approval to be performed. No inspection performed or failed to be performed by the Owner hereunder shall be a waiver of any of the Contractor's obligations hereunder or be construed as an approval or acceptance of the Work or any part thereof.

§ 3.3.8 The Contractor acknowledges that it is the Contractor's responsibility to hire all personnel for the proper and diligent prosecution of the Work and the Contractor shall use its best efforts to maintain labor peace for the duration of the Project. In the event of a labor dispute of the Contractor, its subcontractors or suppliers, the Contractor shall not be entitled to any increase in the Contract Sum.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Equal Opportunity

§ 3.4.2.1 ~~Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.~~ The Contractor shall maintain policies of employment as follows: (1) the Contractor and the Contractor's Subcontractors shall not discriminate against any employee or applicant for employment because of race, gender, religion, national origin, ethnicity, sexual orientation, age or disability; (2) the Contractor and the Contractor's Subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, gender, religion, national origin, ethnicity, sexual orientation, age or disability.

§ 3.4.3 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order of other appropriate written directive by the Owner ~~shall enforce strict discipline and~~

~~good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them~~.

§ 3.4.4 Value Engineering Incentive

§ 3.4.4.1 Any proposal initiated and developed by the Contractor for variation from contractual requirements, which to be acceptable under the Contract would necessitate issuance of a contractual change and which reduces the cost of performing the Contract, without degrading operational functions: e.g., performance, reliability or maintainability of the item. Such proposals would be submitted by the Contractor to the Architect in the same form as prescribed for any other proposal, which would likewise necessitate a change in the contractual requirements but would include a statement that they are a proposed Value Engineering Change subject to the operation of this clause.

§ 3.4.4.2 The Architect will be the sole judge of acceptability, and no substitute will be ordered, installed, used or initiated without the Architect's prior written acceptance which will be evidenced by Change Order. However, any Value Engineering Change accepted by the Architect shall not result in any increase in the Contract Price or Contract Time. By making a request for a Value Engineering Change, the Contractor agrees to pay directly to the Architect all Architect's fees and charges related to the Architect's review of the request for Value Engineering Change, whether or not the Architect accepts the request. The Owner may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substitute approved after award of the Contract.

§ 3.4.5 Owner Direct Purchase

§ 3.4.5.1 The Owner is tax exempt and may wish to exercise its right to purchase directly various construction materials, supplies and equipment that may be part of the Contract. The Owner will, via its purchase orders, purchase that material and the Contractor shall assist the Owner in the preparation of purchase orders. The Owner may direct the Contractor to prepare the purchase order on the Owner's form and make ready for verification and execution by the Owner. The materials shall be purchased from the vendors and or suppliers originally selected by the Contractor, for the price originally negotiated by the Contractor. Within thirty (30) days of the Notice to Proceed (NTP) the Contractor shall prepare a complete list of materials, supplies and equipment, including the cost of each item, for the Project and the Owner will advise the Contractor in writing which items from the list the Owner wishes to purchase directly.

§ 3.4.5.2 At a time deemed acceptable to the Owner, the Contract amount shall be reduced by the net, undiscounted amount of the purchase order, plus all sales taxes and surtax as levied. Issuance of the purchase orders by the Owner does not change any of the Contractor's responsibilities regarding material purchases, or installations, with the exception of the payments for the materials purchased. The Contractor remains responsible for coordination, correct quantities ordered, submittals, protection, storage, scheduling, shipping, security, expedition, receiving and unloading, certifying the accuracy of shipping tickets and invoices, installation, cleaning, all applicable warranties and that all materials purchased meet the requirements of the Contract Documents. The Contractor shall certify all invoices as accurate and acceptable and forward to the Owner the certified invoices for payment by the Owner.

§ 3.4.5.3 In the event that materials, supplies or equipment purchased under this option are defective or rejected for any reason whatsoever, and it becomes necessary in the opinion of the Contractor to initiate legal action against the responsible party, the Owner agrees to assign and subordinate to the Contractor any claims the Owner has against the responsible party resulting from the purchase order and to execute any legal documents necessary to accomplish the assignment, subordination or subrogation of such claims, and to cooperate with the Contractor in such legal action.

§ 3.4.5.4 The Contractor agrees to execute the Owner's document "Contractor's Direct Material Purchase Affidavit" and to submit the affidavit to the Owner along with the above described list of materials, supplies and equipment, as agreed to between the Owner and Contractor. Tax savings will be returned to the Owner via Change Order.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not

executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect or Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work in accordance with the laws of the state and other taxing authorities in the jurisdiction where the Project is located ~~provided by the Contractor~~ that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded. The Contractor shall procure all certificates of inspection, use, occupancy, permits and licenses, pay all charges and fees and give all notices necessary and incidental to the due and lawful prosecution of the Work. Certificates of inspection, use and occupancy shall be delivered to the Owner upon completion of the Work in sufficient time for occupation of the Project in accordance with the approved schedule for the Work. The costs of such procurement, payment and delivery are included within the Contract Sum.

§ 3.7.1.1 Certain permits, regulations and fees may apply to work involved in this Project when such work takes place beyond the limits of the school site. This may include but not be limited to hauling and disposal of materials and debris resulting from demolition. The Contractor shall obtain any such permits, comply with all applicable regulations and pay the cost of any and all fees required by such offsite work.

§ 3.7.1.2 The Owner's building department is the authority having jurisdiction for building code compliance unless otherwise provided in the Contract Documents. The Owner's building permit is required to be issued before construction may commence and will be furnished to the Contractor at no cost upon compliance with permit application requirements.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. The Contractor shall comply with all applicable federal, state and county, and city statutes, safety regulations, codes, ordinances and orders, including the Occupational Safety and Health Administration Act of 1970 (OSHA) as amended from time to time.

§ 3.7.3 If the Contractor performs Work ~~knowing it to be~~ contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions (Excluding Claims for Unsuitable Soils)

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. No adjustment in Contract Sum or Contract Time shall be allowed pursuant to this Article to the extent the concealed or unknown condition should have been reasonably discovered by the Contractor during pre-bid site inspections, review, or preconstruction services. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.7.6 Claims for Unsuitable Soils "Unsuitable soil" does not include soil with high or low moisture content or soil adversely affected by weather conditions and no claim for additional cost will be accepted based solely on the moisture content of excavated material. If the excavated material is unsatisfactory for the specified use on the project solely because of either high or low moisture content or the soil is adversely affected by weather conditions, the Contractor may, in its discretion, either (1) process the material to adjust the moisture content to the specified condition or an acceptable condition if not specified, or (2) remove the material and replace it with satisfactory material. Contractor's election of either option will be at Contractor's expense with no additional cost to the Owner.

§ 3.7.7 E-Verify

§ 3.7.7.1 State of Florida, Office of the Governor, Executive Order 11-116 (superseding Executive Order 11-02) requires all agencies under the direction of the Governor to verify the employment eligibility of all new employees through the U.S. Department of Homeland Security's E-Verify system. Further, in conjunction with Section 448.095 F.S., the Contractor is directed to include as a condition of all contracts for the provision of goods or services to the School Board of Volusia County in excess of nominal value, an express requirement that the Contractor utilizes the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the contract term, and an express requirement that the Contractor include in such subcontracts the requirement that subcontractors performing work or providing services pursuant to the state contract utilize the E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term. To enroll in the E-Verify system employers should visit www.e-verify.gov.

§ 3.7.7.2 Failure to comply shall be cause for termination of contract by the Owner, at its sole discretion. The Contractor is liable for any additional costs incurred as a result of the termination of Contract, Section 448.095(2) F.S.

§ 3.7.7.3 The Contractor is required to submit to the Owner FAC Document 639, Contractor E-Verify Affidavit, upon contract execution.

§ 3.7.8 Use of Coercion for Labor and Services

§ 3.7.8.1 Section 787.06(13) F.S., requires all nongovernmental entities executing, renewing or extending a contract with a governmental entity to provide an affidavit signed by an officer or representative of the nongovernmental entity under penalty of perjury that the nongovernmental entity does not use coercion for labor or services as defined in that statute. The School Board of Volusia County Florida is a governmental entity for purposes of this statute. Unless otherwise directed by the Owner, said affidavit shall be submitted as part of the Contractor's Pre-qualification via the School District's Purchasing Department.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

.1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

.3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during all performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case. The superintendent shall be satisfactory to the Owner in all respects, and Owner shall have the right to require Contractor to dismiss from the Project any superintendent whose performance is not satisfactory to Owner, and to replace such superintendent with a superintendent satisfactory to Owner. The Contractor shall not replace the superintendent without the written consent of the Owner.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.9.4 If required by Owner, a list of all supervisory personnel, including the project manager and superintendent, that the Contractor intends to use on the Project and a chain-of-command organizational chart shall be submitted to the Owner for approval. The Contractor shall not engage supervisory personnel or utilize an organization and chain-of-command other than as approved by Owner in writing and shall not change such personnel or form of organization without the written approval of the Owner.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, ~~promptly~~ within thirty (30) days after ~~being awarded~~ execution of the Contract, shall submit for the Owner's and Architect's ~~information~~ written approval a Contractor's construction schedule for the Work. The construction schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the Owner and conditions of the Work and Project.

§ 3.10.2 Within thirty (30) days of Notice to Proceed (NTP), the Contractor shall prepare, for the Architect's approval, and thereafter keep current, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect reasonable time to review submittals. No payment shall be due until this schedule is submitted and approved. ~~The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.~~

§ 3.10.3 The Contractor shall perform the Work in ~~general accordance~~ conformity with the most recent schedules submitted to the Owner and Architect.

§ 3.10.4 If the Contractor submits a schedule indicating an intention to achieve completion of the Work prior to contractually required dates, including milestones, no liability of the Owner to the Contractor for any failure of the Contractor to complete early shall be created, whether or not the Owner approve such schedule.

§ 3.10.5 At the Owner's option, the Contractor shall provide a schedule utilizing critical path techniques to measure the progress of the Work. Such schedules shall be subject to the Owner's and Architect's written approval.

§ 3.10.6 Float or slack is not for the exclusive use or benefit of either the Owner or the Contractor. Extensions of time for performance will be granted only to the extent that the equitable time adjustments for the activity or activities affected exceed the total float along the activity chain involved at the time the change was ordered or the delay occurred. Notwithstanding the above, the Contractor shall only be entitled to an extension of the time for an excusable delay to the critical path of the Work that delays completion of the Project beyond the completion date stated in the Agreement.

§ 3.10.7 The Contractor acknowledges that the Owner may retain the services of a scheduling consultant at the Owner's expense. The Contractor shall cooperate with any such scheduling consultant at the Owner's direction, including, without limitation, with regard to the preparation of the Project schedule.

§ 3.11 As Built Drawings, Documents and Samples at the Site

§ 3.11.1 As Built drawings shall be updated monthly, which shall be a condition precedent to all Progress Payments, and shall provide as much accuracy as possible. As built drawings of the completed Project are precedent to final payment and shall be submitted in paper document and combined PDF, or other Architect and Owner acceptable digital format, on CD, DVD or other approved file transfer protocol (FTP), transmitted from the Contractor to the Architect for review and acceptance ~~as-built drawings to the Owner shall be a condition precedent to Final Payment. Completed as-built drawings shall be submitted as paper documents and on CD or DVD in combined PDF format~~.

§ 3.11.2 The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, ~~Construction Change Directives,~~ and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form ~~or~~ and paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.11.3 The Contractor shall maintain all approved permit drawings in a manner so as to make them accessible to governmental inspectors and other authorized agencies. All approved drawings shall be appropriately identified and delivered to the Owner within sixty (60) days of final completion of the Work.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents ~~may~~ shall be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with

the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor shall be returned by the Architect without action.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order ~~or Construction Change Directive~~ has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional in Florida, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.12.11 The Contractor shall assemble for the Architect's approval two (2) complete binders of all operating and maintenance data from all manufacturers whose equipment is or will be installed in the Work.

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§ 3.12.12 The Contractor shall submit to Owner one copy of all submissions made to the Architect pursuant to this Section 3.12.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. The Contractor shall be responsible for the permitting, erection, maintaining and removal of all construction signage. The Contractor must submit all sign copy for approval prior to erecting or displaying. The Contractor and Owner shall meet promptly after execution of the Agreement to determine reasonable requirements for ingress and egress from the site. Reasonable locations for staging, parking and a single construction entrance shall be designated by the Contractor, subject to the Owner's approval.

§ 3.13.2 The Contractor shall assure free, convenient, unencumbered and direct access to properties neighboring the Project site for the owners of such properties and their respective tenants, agents, invitees and guests.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. The Contractor shall prevent paint, mortar and concrete splatter on concrete sidewalks and stair tower floors. Any such splatter shall be immediately removed so no evidence of splatter remains. All construction debris shall be removed in a timely manner. Surrounding graded and grassed areas shall be regularly magnetically scanned to collect miscellaneous nails and other sharp objects; the Contractor shall remove such objects from the construction site. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.15.3 Immediately prior to the Architect's inspection for Substantial Completion, the Contractor shall completely clean the premises utilizing a licensed cleaning service. Concrete and ceramic surfaces shall be cleaned and washed. Woodwork and resilient shall be dusted and cleaned. Sash, fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust, marks and smears shall be removed from all surfaces. Hardware and metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect at all times with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings,

Specifications, or ~~other documents~~ Instruments of Service prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 For one hundred dollars ($100.00), which is included in the contract price, the other good and valuable considerations, receipt of which is hereby acknowledged by the Contractor as consideration for the indemnity herein; said Contractor hereby agrees to defend and indemnify the Owner and the Architect/Engineer and their Agents and employees, from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of Work, provided that any such claim, damage, loss or expense is (1) attributed to bodily injury, sickness, disease or death, or to injury to, or destruction of tangible property, other than the work itself, including the loss of use resulting therefrom, and (2) caused in whole or in part by any act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which otherwise exist as to any party or person described in this Article. ~~To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.~~

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§ 3.18.3 The Contractor acknowledges that for one hundred dollars ($100.00) of the Contract Price, as recited in Paragraph 3.18.1 above, and other good and valuable consideration from the Owner and Architect/Engineer, constitutes consideration for giving the Owner and the Architect/Engineer, respectively, the indemnifications required in this Agreement and the Contract Documents. The limit of dollar amount of Contractor's indemnity obligations required by the Agreement and the Contract Documents specifically for those claims caused in whole or in part by the Owner and Architect/Engineer shall be $1,000,000 or the Contract Sum of the Project, whichever is more. The parties agree that the indemnity provided herein bears a reasonable commercial relationship to the Agreement and is incorporated by this reference into the Project specifications and bid documents, if any.

§ 3.18.4 Notwithstanding the above and without monetary limitation, the Contractor hereby indemnifies and holds harmless the Owner, their officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor in the performance of the construction Contract.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until final payment is due and with the Owner's authorization, from time to time during the one-year period for correction of Work described in Section 12.2. ~~the date the Architect issues the final Certificate for Payment~~. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner ~~reasonably~~ informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) ~~known~~ deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies ~~observed~~ in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect, if any, in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner and Contractor shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness to cause no delay in the Work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders ~~and Construction Change Directives~~, or other appropriate written directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing no later than fifteen (15) days after receipt of the request ~~within any time limits agreed upon or otherwise with reasonable promptness~~.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

§ 4.2.15 Upon request of the Owner, claims, disputes and other matters in question relating to the execution or progress of the Work or the interpretation of the Contract Documents may be referred to the Architect for initial decision, which the Architect shall render in writing within a reasonable time, not to exceed fifteen (15) days after the date on which such request is made.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Subcontractors must be properly licensed in accordance with Florida law. ~~Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.~~

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable ~~and timely~~ objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected ~~if~~ without due cause ~~unless the Owner or Architect makes reasonable objection to such substitution~~. The Owner may require the Contractor to change any Subcontractor, person, or entity in situations where the Owner determines that their Work is inadequate and adversely affects the Project.

§ 5.2.5 The Contractor shall disclose the existence and extent of any financial interest, whether direct or indirect, it has in any subcontractors or material suppliers which it proposes for the Project.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 or Termination for Convenience by the Owner pursuant to Paragraph 14.4 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

§ 5.4.1.3 When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract subsequent to the date of acceptance of the assignment; however, in no event shall the Owner's acceptance of such an assignment release the Contractor from its obligations under the subcontract agreement or this Agreement. Subcontracts between the Contractor and its Subcontractors shall provide for the assignment of those subcontracts from the Contractor to the Owner at election of the Owner upon termination of the Contractor.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be ~~equitably~~ adjusted for increases in direct cost resulting from the suspension beyond the thirty (30) days.

~~§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the~~

~~Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.~~

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner, at its option, shall either (1) provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them or (2) shall require that the Contractor provide for such coordination, which the Contractor shall perform when directed by Owner to do so. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.2.6 If any Subcontractor initiates legal or any other proceedings against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at its own expense, and if any settlement, judgment or award against the Owner arises therefrom, the Contractor shall pay or

satisfy it and shall indemnify and reimburse the Owner for all monies paid or to be paid including attorneys' fees and court or other costs which the Owner has incurred.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, ~~Construction Change Directive~~ or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. Agreement on and execution of any Change Order shall constitute a final settlement and a full accord and satisfaction of all matters relating to the change and to the impact of the change on unchanged Work, including all direct and indirect costs of whatever nature, and all adjustments to the Contract Schedule.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. ~~A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor.~~ An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, ~~Construction Change Directive,~~ or order for a minor change in the Work. A change in Contract Sum or Contract Time shall be accomplished only by Change Order. No course of conduct, verbal discussions or dealings between the parties shall be the basis of claims by the Contractor to any change in the Contract Sum or Contract Time.

§ 7.1.4 If the Architect determines that a change or changes in the Work might be or are necessary or desirable, the Architect shall issue a proposal request to the Contractor in which the Architect describes the proposed change or changes in the Work. The Contractor shall respond to each such proposal request in writing within a reasonable time, but in no event more the fourteen (14) days after receipt, such response to contain (1) the amount of any increase or decrease in the Contract Price or Guaranteed Maximum Price for effecting the proposed change or changes in the Work (2) a written comprehensive and itemized cost breakdown of the estimated reasonable additional or reduced costs to the Contractor of all labor, materials and equipment required by such proposal requests and (3) the length of any extension or reduction of the Contract Time for effecting the proposed change or changes in the Work.

§ 7.1.5 If any Change Order, signed by the Owner and the Contractor, results in or contains an adjustment to the Contract Price, the amount of such adjustment shall be conclusively deemed and held to include the Contractor's applicable profit, Fee and costs of and for all applicable taxes, bond premiums, insurance premiums, supervision, overhead, profit, labor, labor impact and materials related to the Change Order and the additional Work required and/or contemplated thereby, and the Contractor shall be conclusively deemed and held to have waived any claim for any additional sum or time extension for delays, disruption, acceleration, loss of productivity, ripple effect, inefficiency or any other matter arising out of or in any way related to such Change Order and the additional Work contemplated thereby.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

.1 The change in the Work, if any;
.2 The amount of the adjustment, if any, in the Contract Sum; and
.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 If the Change Order provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 Unit prices stated in the Contract Documents or subsequently agreed upon;
.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
.4 As provided in Section 7.2.3.

§ 7.2.3 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.2.2, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.2.3 shall be limited to the following:

.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
.5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.2.4 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.2.5 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.2.6 In subparagraph 7.2.3 above, the reasonable allowance for overhead and profit, including the Contractor's Fee, if any, included in the total cost to the Owner, shall be based on the following schedule, which shall be full compensation for all overhead and profit of whatever nature associated with the Change:

.1 For the Contractor, for any Work performed by the Contractor's own forces, ten percent (10%) of the cost.
.2 For the Contractor, for Work performed by its Subcontractor, five percent (5%) of the amount due the Subcontractor.
.3 For each Subcontractor or Sub-subcontractor, for any Work performed by that Subcontractor's or Sub-subcontractor's own forces, ten percent (10%) of the cost.
.4 For each Subcontractor, for Work performed by its Sub-subcontractor, five percent (5%) of the amount due the Sub-subcontractor.
.5 Costs to which overhead and profit are to be applied shall be determined in accordance with subparagraphs 7.2.3.1 through 7.2.3.5.
.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of all increased and decreased costs to both Contractor and its Subcontractors as follows:
    .1 Material quantities and unit costs.
    .2 Labor costs identified with the specific item of material to be placed or operation to be performed.
    .3 Construction equipment
    .4 Workmen's Compensation and Public Liability Insurance.
    .5 Overhead and Profit.
    .6 Employment taxes under FICA and FUTA.
    .7 In no case will a change over $500.00 be approved without such itemization.

§ 7.3 ~~Construction Change Directives~~

~~§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.~~

~~§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.~~

~~§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:~~

- ~~.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;~~
- ~~.2 Unit prices stated in the Contract Documents or subsequently agreed upon;~~
- ~~.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or~~
- ~~.4 As provided in Section 7.3.4.~~

~~§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:~~

- ~~.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;~~
- ~~.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;~~
- ~~.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;~~
- ~~.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and~~
- ~~.5 Costs of supervision and field office personnel directly attributable to the change.~~

~~§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.~~

~~§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.~~

~~§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.~~

~~§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.~~

~~§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably~~

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~~justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.~~

~~§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.~~

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing and approved by the Owner. ~~If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.~~ The Contractor shall not receive any additional compensation, nor shall there be any adjustment to the Contract Time as a result thereof.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day including weekends and legal holidays unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor ~~and Owner~~.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. To ensure that Substantial Completion of the Work is achieved within the Contract Time, the Contractor will, before commencing the Work, submit to Owner a progress schedule showing milestone dates for completion of major portions of the Work which, if the milestone dates are met, will achieve Substantial Completion of the Work within the Contract Time. In the event any milestone date is missed, the Contractor will immediately accelerate the progress of the Work by taking those steps necessary to ensure that the next milestone date is achieved as originally planned, including without limitation, working seven days a week and overtime and employing additional employees or subcontractors. Unless the failure to meet a milestone date is caused by act of the Owner, the additional cost resulting from such acceleration shall not increase the Contract Sum.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 Except as provided in Subparagraph 8.3.2, no adjustment in Contract Sum shall be made for any delays hereunder and no damages shall be paid by the Owner for such delay. The Contractor shall delay or suspend the progress of the Work, or of any part thereof, whenever he shall be so required by written order of the Owner, and for such periods of time as the Owner may order, providing that in the event of such delay or delays or of such suspension or suspensions of the progress of the Work, or any part thereof, the Contract Time for the Work so suspended or of Work delayed by such suspension shall be extended for a period equivalent to the time lost by reason of the suspension(s), except when the Contractor is notified to suspend Work on account of faulty construction or construction methods that endanger the

Work. Such order of the Owner shall not otherwise modify or invalidate in any way any of the provisions of this Contract, and the Contractor shall not be entitled to any damages or compensation from the Owner on account of such delay or delays, suspension or suspensions, except as provided below. ~~If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.~~

§ 8.3.2 When alterations or additions on the critical path are made to the Work, and such alterations or additions increase the overall completion date, the Contractor shall submit to the Architect in writing any resultant claim for an extension in the Contract Time, and shall deliver such claims to the Architect within ten (10) days after the occurrence of the event giving rise to the claim. The recommendation of the Architect regarding extension of Contract Time shall be submitted to the Owner for approval. ~~Claims relating to time shall be made in accordance with applicable provisions of Article 15.~~

§ 8.3.2.1 Any approved changes in Contract Time shall be incorporated in a Change Order. No changes in Contract Time shall be made for any alterations or additions to the Work which are not demonstrated to affect the overall completion of the job. The provision of this Article 8 shall in no way alter, change or invalidate the provisions of the Contract Documents with respect to liquidated damages. The Contractor shall not be entitled to any delay damages or other compensation solely on account of an increase in Contract Time except in accordance with Section 8.3.4 below.

§ 8.3.3 Notwithstanding Subparagraph 8.3.1, if the Work is delayed due to the fault or neglect of the Owner, and such delays have a cumulative total impact of more than fifteen (15) calendar days to the critical path, the Contractor may make claim pursuant to Article 4 for its actual and direct costs arising out of the delay. The Contract Sum shall be adjusted for such actual and direct costs, but in no event shall indirect, impact, inefficiency, offsite or home office overhead, loss of productivity, consequential damages, legal or consulting costs be paid on account of such delays. The Contractor hereby expressly waives its right to such delay or time-related costs or damages.

§ 8.3.4 In the event the Contractor accelerates its Work, without written authorization of the Owner, the Owner shall pay no overtime inefficiencies to the Contractor for such acceleration and the Contractor hereby expressly waives its right to recover such overtime inefficiencies. ~~This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.~~

§ 8.3.5 The Contractor's written claims for extension of Contract Time shall be accompanied by detailed dates, correspondence, notices and any other data which provides proof of the events which are the basis for the claim, including a network analysis justifying the time extension. Said network analysis shall specifically detail the extension of the critical path of the Project caused by the events, which underlie the time extension request. Any claim not including said data and network analysis shall be deemed waived.

§ 8.3.6 Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of the Work by any act or delay of the Owner; or by any acts or neglect by any separate contractor employed by the Owner; material or appurtenances for the Work; or by riot, insurrection, war (excluding wars involving the United States in the Mid-Eastern portion of the World), pestilence, fire, earthquakes, cyclones, floods, epidemics; or through any act, default or delay of other parties under contract with the Owner; then the Contract Time for the Work so delayed shall be extended for a period equivalent to the time lost. Such allowance shall not be made unless a claim for extension of time is made by the Contractor to the Owner and Architect in writing within ten (10) days from the time when the alleged cause for delay occurs.

§ 8.3.7 It is further expressly agreed that the Contractor shall not be entitled to any damages or compensation from the Owner on account of any delays resulting from any of the causes specified above except those circumstances where delays are caused by the Owner or by parties under contract with the Owner, in which circumstances the Contractor shall be entitled to compensation (1) for Contractor's actual costs of increased direct jobsite wages resulting from the extended completion date caused by Owner; and (2) for extra premiums on bonds actually paid by the Contractor on account of the

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additional time required to complete all Work hereunder. Any change in the Contract Time resulting from any claims for delays shall be incorporated in a signed Change Order upon approval of the change by the Owner.

§ 8.3.8 Except for weather events listed in Section 8.3.6 above, Contractor expressly assumes the risk for all weather delays of every kind and nature.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 ~~If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.~~

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. The schedule of values shall be prepared in such manner that each major item of the Work and each subcontracted item of the Work is shown as a separate line item on AIA Document G703, Application and Certificate for Payment, Continuation Sheet, or other form acceptable to the Owner. This schedule, unless objected to by the Architect or Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment. The Contractor shall not make changes in the Schedule of Values without prior approval of the Architect and Owner. The form for the Application for Payment shall be AIA Document G702, supported by AIA Document G703, or other Owner approved form. The Schedule of Values shall be prepared in such a manner that each major item of Work and each subcontracted item of Work is shown as a single item on AIA Document G703 Application and Certificate for Payment Continuation Sheet, or other Owner approved form.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 ~~As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.~~

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing and bonded or insured as required by the Owner. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site. The Contractor shall submit, within 30 days after the date of commencement of the Work and thereafter as the Owner

requires, schedules of materials and equipment for each category or subcontract for which application for payment under this Section 9.3.2 will be made, which schedules shall include items, quantities, value of unit prices with extensions. Schedules shall be updated on a monthly basis and submitted as an attachment to the Contractor's Application for Payment.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment, in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When ~~either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15~~ the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Contractor disputes any determination by the Architect and/or Owner with respect to any Certificate of Payment, the Contractor nevertheless expeditiously shall continue to complete the Work. ~~If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.~~

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. ~~Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.~~

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within ~~seven~~ fourteen days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within ~~seven~~ fourteen days after the date established in the Contract Documents, the amount certified by the Architect ~~or awarded by binding dispute resolution~~, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount ~~owing~~ not in dispute has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable direct costs of shutdown, ~~delay~~ and start-up~~, plus interest~~ as provided for in the Contract Documents. Notwithstanding the preceding sentence, the Contractor shall not stop the Work during the pendency of a bona fide dispute between the Owner and the Contractor, provided all sums not in dispute claimed by the Contractor are paid.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. For the Work or any designated portion thereof to be "Substantially Complete", the Work must also satisfy all of the following conditions, except to the extent the same shall be specifically waived or modified in writing by the Owner:

.1 the Work has been completed in accordance with the Contract Documents, except for Punch List Work, to the extent required for the Owner to obtain an occupancy permit and such permit(s) shall have been granted by the appropriate authorities for all of the Work; and

.2 all HVAC, plumbing and electrical systems included in the Work are functioning substantially in accordance with the Contract Documents; and

.3 all life safety systems included in the Work are functioning in accordance with the Contract Documents; and

.4 a Certificate of Substantial Completion has been issued by the Architect as required under Paragraph 9.8; and

.5 all elevators, if any, included in the Work are functioning in accordance with the Contract Documents; and

.6 all offices, rooms and public areas are ready to receive, or have received if required for issuance of a Certificate of Occupancy, furniture, fixtures and equipment supplied by the Owner.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect and Owner a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect and Owner will ~~make~~ perform an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's and or the Owner's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect and Owner to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is determined to be substantially complete, the Architect will prepare a Certificate of Substantial Completion, utilizing the Owner's Procore platform, that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time of thirty (30) days within which the Contractor shall finish all items on the list. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 ~~When the Work or designated portion thereof is substantially complete,~~ The Architect, as the Owner's representative, including all Project Consultants, shall prepare a single list of items (Punch List) to be completed by the Contractor. The Punch List shall include close out requirements, not limited to, Operations and Maintenance Manual, warrantees, and as built drawings, contingent on Project completion, which will be submitted to the Contractor. The

Contractor will assign a cost estimate for each item then submit the Punch List to the Architect and Owner for review and acceptance. Estimated costs to render the Project complete, satisfactory and acceptable are to be agreeable to the Contractor, Owner and Architect. The development and review of the Punch List shall be completed within 30 calendar days, or 45 calendar days by applicable law and mutual agreement of Contractor and Owner, of the substantial completion date and shall be issued by the Architect to the Contractor and Owner within five (5) days of acceptance by all parties. Within twenty (20) business days after the final Punch List is issued, the Owner must pay the Contractor the remaining contract balance that includes all retainage previously withheld less an amount equal to one hundred fifty percent (150%) of the estimated cost to complete the Punch List items. ~~will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.~~

§ 9.8.6 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. ~~Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.~~

§ 9.8.7 The Owner shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time for completing the entire Work or such portions of the Work may not yet have expired. However, such action on the part of the Owner shall not be deemed to be an acceptance of any Work not completed in accordance with the Contract Documents. Likewise, absent the issuance of a Certificate of Substantial Completion by the Project Architect, no portion of the Work shall be subject to the running of the Contractor's bonded one (1) year guarantee on workmanship and materials, despite the fact that the building may be partially utilized. Where mechanical equipment is used prior to final inspection, the Owner shall perform routine maintenance and furnish those supplies that normally wear out in use, such as seals, packings, lubricants, etc. However, any major failure or breakdown of equipment not attributable to lack of maintenance or improper use or abuse of the equipment by the Owner shall be made good by the Contractor under terms of its contract warranty, guarantee, bonds, etc.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2, 9.8.3, 9.8.4 and 9.8.5. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract

Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees. As a condition precedent to Final Payment, and as part of the Application for Payment, the Contractor shall deliver to the Owner all warranties, guarantees and other close out documents required under the Contract Documents.

§ 9.10.2.1 Final Payment is also contingent upon Building Official final inspection and Owner acceptance of the Department of Education (DOE) document OEF 209, Certificate of Final Inspection (CFI).

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

.1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
.2 failure of the Work to comply with the requirements of the Contract Documents;
.3 terms of special warranties required by the Contract Documents; or
.4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

§ 9.10.6 After execution of the Certificate of Substantial Completion and the Certificate of Final Inspection (CFI), and prior to the submittal of the Final Certificate and Application for Payment, the Contractor shall submit to the Architect, along with the affidavits and other documents set forth in Section 9.10.2 above:

.1 Validated warranties and notarized copies of all guarantees for equipment and materials as required by the Construction Documents, and, if applicable, as referred to in the Supplementary Conditions;
.2 Copies of all approved Shop Drawings or installation diagrams and three (3) copies of all brochures, manuals, etc. of all equipment as offered by the manufacturers;
.3 List of subcontractors and major material suppliers (shall include address, telephone number and name of individual to contact regarding this Project); and

.4 As built drawings of the completed Project in paper document and combined PDF or other Architect and Owner acceptable digital format, on CD, DVD or other approved file transfer protocol (FTP), transmitted from the Contractor to the Architect for review and acceptance; Architect shall review for inclusion in the record drawings then transmit to the Owner.

§ 9.10.7 Prior to submission of the Final Certificate and Application for Payment, Contractor and manufacturer's representatives shall provide free instruction in the proper use of installed equipment to representatives of the Owner as designated by the Architect. Instruction shall be given in presence of the Architect.

§ 9.10.7.1 Instruction of the Owner's designated Maintenance Supervisor in the proper methods of cleaning and maintaining all of the finished surfaces and the proper methods of replacement of the consumable items such as filters, light bulbs, washers, etc. shall be the responsibility of the Contractor.

§ 9.10.8 Prior to submission of the Final Certificate and Application for Payment, the Contractor shall start up, test, adjust, balance and otherwise place in a satisfactory working condition all items of mechanical and electrical systems and shall fully instruct representatives of the Owner in the care and operation of such systems.

§ 9.10.8.1 Contractor shall submit to the Architect, along with final requisition for payment, two (2) copies of a manual for the Project, assembled and bound, presenting for the Owner's guidance full details for care and maintenance of equipment included in the Contract.

§ 9.10.8.2 Contractor shall, for this manual, obtain from subcontractors literature of manufacturers relating to equipment, including motors; also furnish cuts, wiring diagrams, instruction sheets and other information pertaining to same in overall operation and maintenance.

§ 9.10.9 During a valid warranty period, if the Contractor is unable or unwilling to respond immediately to make emergency repairs under conditions which the Owner may determine to be an emergency situation, the Owner reserves the right to make such emergency repairs and then to bill the Contractor for a fair and reasonable amount in the reimbursement for such repair.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

.1 employees on the Work and other persons who may be affected thereby;

.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss. Contractor shall comply with all applicable federal, state and county, and city statutes, safety regulations, codes, ordinances and orders, including the Occupational Safety and Health Administration Act of 1970 (OSHA).

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property
If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.2.9 Contractor shall protect adjoining private or municipal property and shall provide barricades, temporary fences, and covered walkways required to protect the safety of passers-by, as required by prudent construction practices, local building codes, ordinances or other laws, or the Contract Documents.

§ 10.2.10 Contractor shall maintain Work, materials and apparatus free from injury or damage from rain, wind, storms, frost or heat. If adverse weather makes it impossible to continue operations safely in spite of weather precautions, the Contractor shall cease Work and notify the Owner and the Architect of such cessation. The Contractor shall not permit open fires on the Project site.

§ 10.2.11 In addition to its other obligations pursuant to this Article 10, the Contractor shall, at its sole cost and expense, promptly repair any damage or disturbance to walls, utilities, sidewalks, curbs and the property of third parties (including municipalities) resulting from the performance of the Work, whether by it or by its Subcontractors at any tier. The Contractor shall maintain streets in good repair and traversable condition.

§ 10.3 Hazardous Materials and Substances
§ 10.3.1 The Owner has on file at each school and the department of Facilities Services, the following information: (1) Asbestos Management Plan, and (2) Asbestos Survey Report. These documents are available for the Contractor's review at the above locations. The Contractor shall determine if the information contained therein is relevant to the Project. The Contractor shall execute the Owner's "Contractor Acknowledgement Form" of these documents. ~~The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.~~

§ 10.3.1.1 If during the construction of the Project any known hazardous material, or friable asbestos is suspected or encountered, Work in that area shall be suspended and the Owner's Representative shall be notified immediately.

§ 10.3.1.2 The Owner shall be responsible for investigation, removal and disposition of any such material in accordance with applicable laws and regulations. The Contractor will be directed by the Owner on further procedures concerning the project as a result of investigation, removal and disposition of such material.

§ 10.3.2 In the event the Contractor encounters on the site material reasonably believed to be asbestos or polychlorinated biphenyl (PCB) which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner's Representative in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless, by written agreement of the Owner and Contractor, or in accordance with final determination by the Architect. ~~Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.~~

§ 10.3.3 The Contractor shall not be required, pursuant to Article 13, perform without consent any Work relating to asbestos or polychlorinated biphenyl (PCB). ~~To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.~~

§ 10.3.4 To the fullest extent permitted by law, the Owner shall defend, indemnify and hold harmless the Contractor and its agents and employees from and against claims, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from performance of the Work in the affected area if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, other than the Work itself, including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Owner, anyone directly or indirectly employed by the Owner, or anyone for whose acts the Owner may be liable. ~~The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.~~

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 ~~If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.~~

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance ~~of the types and limits of liability, containing the endorsements, and subject to the terms and conditions,~~ as described in the Agreement or elsewhere in the Contract Documents. ~~The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.~~

§ 11.2.2 ~~Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.~~

§ 11.2.3 ~~Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-~~

~~subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.~~

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7. ~~If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.~~

§ 11.3.3 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power. If such objection be made, the Owner shall not make any settlement with respect to such loss until a resolution has been reached by agreement between such parties in interest and the insurers or by a court of competent jurisdiction.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may require the Contractor to purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. ~~The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.~~

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the ~~Owner~~ Contractor as fiduciary and made payable to the ~~Owner~~ Contractor as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The ~~Owner~~ Contractor shall pay the Architect and ~~Contractor~~ Owner their just shares of insurance proceeds received by the ~~Owner~~ Contractor, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the ~~Owner~~ Contractor shall notify the ~~Contractor~~ Owner of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The ~~Contractor~~ Owner shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the ~~Contractor~~ Owner does not object, the ~~Owner~~ Contractor shall settle the loss and the ~~Contractor~~ Owner shall be bound by the settlement and allocation. Upon receipt, the ~~Owner~~ Contractor shall deposit the insurance proceeds in a separate account and make the

appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. ~~Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.~~

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's or Owner's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect or Owner, be uncovered for the Architect's or Owner's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect ~~or~~ for failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. ~~During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.~~ If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

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§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work nor to Owner's right to make claim with respect to latent defects.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate ~~and equitable~~. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located ~~excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4~~.

§ 13.1.2 Historical lack of enforcement of any local law shall not constitute a waiver of Contractor's responsibility for compliance with such law in a manner consistent with the Contract Documents unless and until the Contractor has received written consent for the waiver of such compliance from the Owner and the agency responsible for the local law enforcement.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. ~~Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party~~ Contractor may not assign its rights or obligation under this Contract. If Contractor attempts to make such an assignment, it shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 ~~The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.~~

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.3.3 The invalidity of any part or provision of the Contract Documents shall not impair or affect in any manner the validity, enforceability or effect of the remaining parts and provisions of the Contract Documents.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations

concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.1.1 During construction, periodic building code compliance inspections are required and will be performed by the Owner's building department inspectors when requested by the Contractor. It is the responsibility of the Contractor to properly request such code inspections and no Work shall be covered until such Work has been inspected for code compliance.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity assigned by the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense, including the cost of retesting for verification of compliance if necessary, until the Architect certifies that the Work in question does comply with the requirements of the Contract Documents, and all such costs shall not be included in computing the Contract Sum.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.6 Time Limits on Claims

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law.

§ 13.7 Financial Disclosures

§ 13.7.1 During the term of this Contract, Contractor covenants and agrees that it will keep adequate books and records of accounts in accordance with Generally Accepted Accounting Principles (GAAP). Contractor further covenants and agrees that, upon request from Owner, Contractor shall provide to Owner financial statements of Contractor, including current income and expense statements of Contractor, consolidated balance sheets signed by a financial officer of Contractor, and audited reports provided to Contractor's Surety, audited financial statements certified by a Certified Public Accountant concerning the financial affairs of Contractor and all affiliates of Contractor, and such other financial information requested by Owner. All such financial information shall comply with GAAP.

§ 13.7.2 In the event the Contractor becomes insolvent and/or fails to pay its current obligations when they become due, Contractor shall so advise Owner of such situation. Contractor hereby authorizes its sureties, lenders, financial institutions and other third parties to release to Owner financial information requested by Owner, including, but not limited to, the financial information described in the preceding Section 13.7.1.

§ 13.8 Waiver of Jury Trial

All parties hereby waive any and all right to any trial by jury in any action or proceeding arising directly or indirectly hereunder.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

.1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;

.2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped; or

.3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents.~~; or~~

~~.4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.~~

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, ~~as well as reasonable overhead and profit on Work not executed,~~ and costs incurred by reason of such termination excluding profit on unexecuted Work.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to material matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

.1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

.2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;

.3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; ~~or~~

.4 otherwise is guilty of substantial breach of a provision of the Contract Documents; or

.5 is adjudged a bankrupt or insolvent, or if it makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the Contractor or for any of its property, or if it files a petition to take advantage of any debtor's loss, or to reorganize under the bankruptcy or similar laws.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, ~~and upon certification by the Architect that sufficient cause exists to justify such action,~~ the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4; and

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the ~~Initial Decision Maker~~ Architect, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the direct cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall not include profit. No adjustment shall be made to the extent

.1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or

.2 that an adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

.1 cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; ~~and the termination fee, if any, set forth in the Agreement~~ along with reasonable overhead and profit on the Work performed to date, but in no event shall the Contractor be entitled to anticipated profits on unperformed Work.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

Any statutes of limitations shall commence to run, and all causes of action shall be deemed to have accrued, in accordance with applicable Florida law. ~~The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the~~

~~Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.~~

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either party must be made within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice to the Architect and the other party. Claims must specifically detail all facts and issues substantiating the Claim, including all costs and expenses incurred. Contractor Claims must be made in writing and timely filed in accordance with the specific requirements of the Contract Documents and under no circumstances whatsoever be based upon actual or verbal notice or lack of prejudice to the other party. An additional Contractor Claim after the initial Claim has been implemented by Change Order will not be considered unless submitted in a timely manner. ~~the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.~~

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by written notice to the other party. In such event, no decision by the ~~Initial Decision Maker~~ Architect is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the ~~Initial Decision Maker's~~ Architect's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment accordingly ~~in accordance with the decision of the Initial Decision Maker~~.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5.1 If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Section 15.1.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Decision of the Architect. Claims, including those alleging an error or omission by the Architect but excluding those arising under Section 10.3 shall be referred initially to the Architect for decision. An initial decision by the Architect shall be required as a condition precedent to mediation or litigation of all Claims between the Contractor and Owner arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Architect with no decision having been rendered by the Architect. The Architect will not decide disputes between the Contractor and persons or entities other than the Owner. ~~Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.~~

§ 15.2.2 The ~~Initial Decision Maker~~ Architect will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the ~~Initial Decision Maker~~ Architect is unable to resolve the Claim if the ~~Initial Decision Maker~~ Architect lacks sufficient information to evaluate the merits of the Claim or if the ~~Initial Decision Maker~~ Architect concludes that, in the Architect's sole discretion, it would be inappropriate for the ~~Initial Decision Maker~~ Architect to resolve the Claim.

§ 15.2.3 In evaluating Claims, the ~~Initial Decision Maker~~ Architect may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the ~~Initial Decision Maker~~ Architect in rendering a decision. The ~~Initial Decision Maker~~ Architect may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the ~~Initial Decision Maker~~ Architect requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the ~~Initial Decision Maker~~ Architect when the response or supporting data will be furnished, or (3) advise the ~~Initial Decision Maker~~ Architect that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the ~~Initial Decision Maker~~ Architect will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Architect will approve or reject Claims by written decision, which shall state the reasons therefore and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be final and binding on the parties but subject to mediation and litigation. ~~The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.~~

§ 15.2.6 ~~Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.~~

§ 15.2.6.1 ~~Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.~~

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract~~, except those waived as provided for in Sections 9.10.4, 9.10.5 and 15.1.7,~~ shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 Claims, disputes or other matters in question between the parties to this Agreement shall be first subject to pre-suit mediation prior to the filing of any legal claims or litigation. Completion of pre-suit mediation is a condition precedent to litigation. The obligation to mediate is a material and essential provision of the Agreement. ~~The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.~~

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 Unless otherwise agreed in writing, the Contractor shall carry on the Work and maintain its progress during any mediation or litigation, and the Owner shall continue to make payments to the Contractor in accordance with the Contract Documents. ~~The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.~~

§ 15.3.5 Either party may initiate a mediation preceding by a request in writing to the other party within a reasonable time after the claim, dispute or other matter in question has arisen or as provided in subparagraph 15.3.1, but in no event after the expiration of the applicable statute of limitations.

§ 15.3.6 The parties shall endeavor in good faith to mutually agree upon an acceptable mediator. In the event the parties have not agreed upon a mediator within thirty (30) days of the request for mediation, the Orlando office of the American Arbitration Association, upon the written request of either party, shall appoint a mediator from its pool of approved mediators.

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§ 15.3.7 Unless otherwise mutually agreed, the mediation shall be held in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect, each party to bear its own fees, costs and expenses.

§ 15.3.8 In the event that pre-suit mediation is unsuccessful, all claims, disputes or other matters in question shall be resolved in the Circuit Courts of Volusia County Florida. The Parties, including the Contractor's Surety, waive Venue and Jurisdiction of any Federal Court and expressly waive Trial by Jury.

§ 15.3.9 All references to Arbitration in the Contract Documents are deleted.

~~§ 15.4 Arbitration~~

~~§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.~~

~~§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.~~

~~§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.~~

~~§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.~~

~~§ 15.4.4 Consolidation or Joinder~~

~~§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).~~

~~§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.~~

~~§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.~~

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CONTRACTOR E-VERIFY AFFIDAVIT

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 639

PURSUANT TO STATE OF FLORIDA, OFFICE OF THE GOVERNOR, EXECUTIVE ORDER 11-116 (Superseding Executive Order 11-02) AND SECTION 448.095 F.S.

Executive Order 11-116 requires all agencies under the direction of the Governor to verify the employment eligibility of all new employees through the U.S. Department of Homeland Security's E-Verify system. Further, in conjunction with Section 448.095 F.S., the Contractor is directed to include as a condition of all contracts for the provision of goods or services to the School Board of Volusia County in excess of nominal value, an express requirement that the Contractor utilizes the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the contract term, and an express requirement that the Contractor include in such subcontracts the requirement that subcontractors performing work or providing services pursuant to the state contract utilize the E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

In accordance with Executive Order 11-116 and Section 448.095 F.S. the School Board of Volusia County Florida requires all contractors who are awarded state funded contracts to verify newly hired employees using the U.S. Department of Homeland Security's E-Verify system. It is the responsibility of the awarded Contractor to insure compliance. To enroll in the E-Verify system employers should visit www.e-verify.gov.

By affixing your signature below you hereby affirm that you will comply with all applicable E-Verify requirements for the following project:

Facility Name: _____ Project No.: _____

Project Name: _____

The undersigned has hereunto set his/her hand this _____ day of _____ , _____

_____ _____
(Print or Type Name, Title) *(Signature of Affiant)*

_____ _____
(Federal Employer ID Number – FEIN) *(E-Verify Number)*

_____
(Firm Name)

_____ _____ _____ _____
(Firm Address) *(City)* *(State)* *(Zip Code)*

NOTARY PUBLIC

STATE OF FLORIDA, COUNTY OF _____

Before me, the undersigned authority, personally appeared _____
known to me to be the person described herein and who executed the foregoing instrument and acknowledged before me executed the same.
IN WITNESS WHEREOF, I have hereunto set my hand and official seal this
_____ day of _____ , _____

(Notary Seal)

My commission expires: _____
(Notary Signature)

_____ _____
(Date) *(Print, type or stamp name of notary public)*

☐ Personally known to me ☐ Produced ID _____
(Type of ID, if applicable)

PERFORMANCE AND PAYMENT BOND

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 640

PUBLIC CONSTRUCTION BOND

Bond No. _____

BY THIS BOND, WE *(Contractor Firm)* _____, *(Physical Address)* _____, *(Phone)* _____, a corporation, *(Surety Firm)* _____, *(Physical Address)* _____, *(Phone)* _____, as Surety, are bound to *(Owner)* School Board of Volusia County Florida, *(Address)* 200 North Clara Avenue, DeLand Florida 32720, *(Phone)* (386) 734-7190, herein called Owner, in the sum of _____ ($_____) for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the contract dated _____, between Principal and Owner for construction of *(Facility Name)* ___, *(Address)* _____, *(Project Name)* _____,*(Contract/Project No.)* ___, the contract being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and
2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal, in the prosecution of the work provided for in the contract; and
3. Pays Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a default by Principal under the contract; and
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond.

DATED ON _____ day of _____, _____ _____

Signed, sealed and delivered in the presence of:

_____
As to President / Principal

By: _____
President / Principal

_____
(Print/Type Name of Witness to Contractor)

_____
(Print/Type Name of Contractor)

By: _____
Attorney-in-Fact

_____
As to Surety

_____
(Print/Type Name of Attorney-in-Fact)

_____
(Print/Type Name of Witness to Surety)

_____
Florida Resident Agent

_____
(Print/Type Name of Florida Resident Agent)

NOTE: If both Principal and Surety are corporations, the respective corporate seals should be affixed and attached. Power-of- Attorney to be attached.

APPROVED _____
Signature

Approved as to form only and for reliance only by the School Board of Volusia County.

_____
Printed Name

_____
Florida Bar Number

CONTRACTOR'S DIRECT MATERIAL PURCHASE AFFIDAVIT

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 641

STATE OF FLORIDA
COUNTY OF VOLUSIA

COMES NOW _____, and after being duly sworn, does depose and state as follows:

1. My name is: _____, I am employed in the position of *(title)* _____ for *(Contractor)* _____.

2. I am over the age of eighteen years and I have personal knowledge of the facts stated herein.

3. All of the materials which the School Board of Volusia County Florida has purchased directly for the project known as *(Facility Name)* _____, *(Project Name)* _____, *(VCS Project No.)* _____, and pursuant to AIA Document A201-2017, Article 3.4.5 have been purchased from subcontractors, suppliers or vendors who provided bids to the Contractor for this Project and whose bids were relied upon by the Contractor in submitting its bid to Volusia County Schools.

4. All materials purchased directly by Volusia County Schools from the Contractor's subcontractors, suppliers and vendors were purchased at or below the price originally negotiated by the Contractor.

FURTHER AFFIANT SAYETH NAUGHT _____

Sworn to and subscribed before me this _____ day of _____ _____ .

_____ _____

Signature of Notary Public, State of Florida

Print, Type or Stamp Commissioned Name of Notary Public

Personally Known ☐ or Produced Identification ☐

Type of I. D. Produced _____

CONTRACTOR'S ACKNOWLEDGMENT FORM

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 642
(Asbestos Survey)

TO: Volusia County Schools
Facilities Design and Construction
3750 Olson Drive
Daytona Beach, Florida 32124

I acknowledge that I have been given access to and have read the Asbestos Survey, Management Plan, Re-inspection Report (if applicable) and/or Certificate of Final Inspection (if applicable).

Facility Name: _____

Address: _____

☐ Not applicable - Reason: _____

I further acknowledge that I must cease work and notify the project manager and environmental specialist, 3750 Olson Drive, Daytona Beach Florida 32124, telephone number (386) 947-8786, in the event of encountering materials not previously identified by the aforementioned reports. In addition, I understand that any questions regarding the aforementioned reports should be directed to the environmental specialist as stated above.

My reason for being in the school is: _____

My signature is acknowledgement of the above.

_____ Date: _____
(Signature)

Printed Name: _____

Firm's Name: _____

Address: _____

Telephone: _____

AIA® Document G702™ – 1992

Application and Certificate for Payment

TO OWNER:

PROJECT: G Series Form

APPLICATION NO: 001
PERIOD TO:
CONTRACT FOR: General Construction
CONTRACT DATE:
PROJECT NOS: / /

Distribution to:
OWNER: ☐
ARCHITECT: ☐
CONTRACTOR: ☐
FIELD: ☐
OTHER: ☐

FROM CONTRACTOR:

VIA ARCHITECT:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM		$0.00
2. NET CHANGE BY CHANGE ORDERS		$0.00
3. CONTRACT SUM TO DATE (Line 1 ± 2)		$0.00
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)		$0.00
5. RETAINAGE:		
a. 0 % of Completed Work (Column D + E on G703)	$0.00	
b. 0 % of Stored Material (Column F on G703)	$0.00	
Total Retainage (Lines 5a + 5b or Total in Column I of G703)		$0.00
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)		$0.00
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)		$0.00
8. CURRENT PAYMENT DUE		$0.00
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)	$0.00	

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	$0.00	$0.00
Total approved this Month	$0.00	$0.00
TOTALS	$0.00	$0.00
NET CHANGES by Change Order		$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: _____ Date: _____

State of:

County of:

Subscribed and sworn to before me this day of

Notary Public:
My Commission expires:

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED $0.00

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

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User Notes: (3B9ADA39)

AIA® Document G703™ – 1992

Continuation Sheet

AIA Document, G702™–1992, Application and Certification for Payment, or G736™–2009, Project Application and Project Certificate for Payment, Construction Manager as Adviser Edition, containing Contractor's signed certification is attached.
In tabulations below, amounts are in US dollars.
Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:	001
APPLICATION DATE:	
PERIOD TO:	
ARCHITECT'S PROJECT NO:	

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D + E + F)	% (G ÷C)	BALANCE TO FINISH (C - G)	RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00
	GRAND TOTAL	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**0.00%**	**$0.00**	**$0.00**

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PARTIAL RECEIPT AND RELEASE
PROGRESS PAYMENT
SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 655

The undersigned _____, of _____ was heretofore on _____ day of _____, _____ awarded a contract by the SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA, to furnish all of the materials and labor in the construction project entitled *(Facility Name)* _____, *(Address)* _____, *(Project Name)* _____, *(VCS Project No.)* _____ , in accordance with the plans and specifications therefore, as prepared by ____, Architect, and the undersigned has completed said work and fully complied with said contract and has heretofore received the sum of _____, ($_____) as progress payment thereon.

That the undersigned has this date received from the SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA, the sum representing the balance due as of this progress payment, under terms of said contract, and certifies that said work has been performed in accordance with terms thereof and that, as Contractor, has received monies due and to become due to thereunder for work performed and materials furnished in connection with said work, and that, as Contractor, has paid in full all persons furnishing labor and/or materials in connection therewith, including all subcontractors and suppliers, and that there are no unpaid bills for labor performed or materials furnished in connection with said Work or improvements to date.

That the undersigned, for value received, does hereby forever release and discharge the said building and premises as described in said contract, from any and all liens, claims or demands whatsoever that, as Contractor, has or may have for work performed or materials furnished in connection therewith, or for work performed or materials furnished thereon by any subcontractor or supplier, and will hold the SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA, safe and harmless from any and all loss and liability arising or to arise by reason of any unpaid bills for labor performed or materials furnished on said building or premises in connection with said work or improvements as of this progress payment.

IN WITNESS WHEREOF,
the undersigned has hereunto set hand and seal this _____ day of _____ , _____
Witnessed by:

_____ _____ *(SEAL)*
(Witness Signature) *(Contractor Signature)*

_____ _____
(Print or Type Name, Title) *(Print or Type Name, Title)*

STATE OF FLORIDA, COUNTY OF
Before me, the undersigned authority, personally appeared _____
to me well-known and known to me to be the person described in and who executed the foregoing instrument, and acknowledged before me executed the same.
IN WITNESS WHEREOF, I have hereunto set my hand and official seal this
_____ day of _____ , _____

(Notary Seal)

My commission expires: _____
Notary Public, State of Florida

_____ _____
(Date) *(Print, type or stamp name of notary public)*

☐ Personally known to me ☐ Produced ID _____
(Type of ID, if applicable)

AIA® Document G707A™ – 1994

Consent of Surety to Reduction in or Partial Release of Retainage

PROJECT: *(Name and address)*	**ARCHITECT'S PROJECT NUMBER:**	OWNER: ☐
	CONTRACT FOR:	ARCHITECT: ☐
		CONTRACTOR: ☐
TO OWNER: *(Name and address)*	**CONTRACT DATED:**	SURETY: ☐
		OTHER: ☐

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

, SURETY,

on bond of
(Insert name and address of Contractor)

, CONTRACTOR,

hereby approves the reduction in or partial release of retainage to the Contractor as follows:

The Surety agrees that such reduction in or partial release of retainage to the Contractor shall not relieve the Surety of any of its obligations to
(Insert name and address of Owner)

, OWNER,

as set forth in said Surety's bond.

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

_____
(Surety)

_____
(Signature of authorized representative)

Attest:
(Seal):

_____
(Printed name and title)

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AIA® Document G707™ – 1994

Consent Of Surety to Final Payment

PROJECT: *(Name and address)*	**ARCHITECT'S PROJECT NUMBER:**	OWNER: ☐
	CONTRACT FOR:	ARCHITECT: ☐
		CONTRACTOR: ☐
TO OWNER: *(Name and address)*	**CONTRACT DATED:**	SURETY: ☐
		OTHER: ☐

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

, SURETY,

on bond of
(Insert name and address of Contractor)

, CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety of any of its obligations to
(Insert name and address of Owner)

, OWNER,

as set forth in said Surety's bond.

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

_____
(Surety)

_____
(Signature of authorized representative)

Attest:
(Seal):

_____
(Printed name and title)

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CONTRACTOR AFFIDAVIT

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 661

PURSUANT TO SECTION 713.06(3), FLORIDA STATUTES

TO: SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA

The undersigned, as Contractor, has heretofore, on the _____ day of _____, in the year _____, been awarded a contract by you, as Owner, to furnish all of the materials and labor in the construction project entitled *(Facility Name)* _____, *(Address)* _____, *(Project Name)* _____,*(VCS Project No.)* _____, for the final contract price of _____ ($_____) in accordance with plans and specifications therefore, as prepared by _____, Architect.

The said project has been completed and the contract and plans therefore fully complied with, and all of the contract price has been paid by you, except the final payment thereon, which is now due, but is being withheld until a sworn statement is furnished as required by law, showing whether there are any unpaid and outstanding bills in connection with said building.

That the undersigned hereby certified, under oath, that all lienors contracting directly with or directly employed by the undersigned, on said contract, have been paid in full, and further certified, under oath, that there are no outstanding or unpaid bills for labor performed or materials furnished in connections with said work or improvements.

That this sworn statement is furnished by the Contractor to the Owner pursuant to Section 713.06(3), Florida Statutes.

IN WITNESS WHEREOF,
the undersigned has hereunto set his hand and seal this _____ day of _____ , _____
Witnessed by:

_____ _____ *(SEAL)*
(Witness Signature) *(Contractor Signature)*

_____ _____
(Print or Type Name, Title) *(Print or Type Name, Title)*

STATE OF FLORIDA, COUNTY OF VOLUSIA
Before me, the undersigned authority, personally appeared _____
to me well-known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged before me that he executed the same.
IN WITNESS WHEREOF, I have hereunto set my hand and official seal this
_____ day of _____ , _____

(Notary Seal)

My commission expires: _____
Notary Public, State of Florida

_____ _____
(Date) *(Print, type or stamp name of notary public)*

☐ Personally known to me ☐ Produced ID _____
(Type of ID, if applicable)

RECEIPT AND RELEASE

SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA
FAC DOCUMENT 662

The undersigned _____, of _____ was heretofore on _____ day of _____, _____ awarded a contract by the SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA, for the final contract price of _____, ($_____) to furnish all of the materials and labor in the construction project entitled *(Facility Name)* _____, *(Address)* _____, *(Project Name)* _____, *(VCS Project No.)* _____, in accordance with the plans and specifications therefore, as prepared by _____, Architect, and the undersigned has completed said work and fully complied with said contract and has heretofore received the sum of _____, ($_____) as payment thereon.

That the undersigned has this date received from the SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA, the sum of _____, ($_____) representing the full balance due him as Contractor, under terms of said contract, and certifies that said contract has been fully performed in accordance with terms thereof and that, as Contractor, has received all monies due and to become due thereunder for work performed and materials furnished in connection with said work, and that, as Contractor, has paid in full all persons furnishing labor and/or materials in connection therewith, including all subcontractors and suppliers, and that there are no unpaid bills for labor performed or materials furnished in connection with said work or improvements.

That the undersigned, for value received, does hereby forever release and discharge the said building and premises as described in said contract, from any and all liens, claims or demands whatsoever that, as Contractor, has or may have for work performed or materials furnished in connection therewith, or for work performed or materials furnished thereon by any subcontractor or supplier, and will hold the SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA, safe and harmless from any and all loss and liability arising or to arise by reason of any unpaid bills for labor performed or materials furnished on said building or premises in connection with said work or improvements.

IN WITNESS WHEREOF,
the undersigned has hereunto set hand and seal this _____ day of _____ , _____
Witnessed by:

_____ _____ (SEAL)
(Witness Signature) *(Contractor Signature)*

_____ _____
(Print or Type Name, Title) *(Print or Type Name, Title)*

STATE OF FLORIDA, COUNTY OF
Before me, the undersigned authority, personally appeared _____
to me well-known and known to me to be the person described in and who executed the foregoing instrument, and acknowledged before me executed the same.
IN WITNESS WHEREOF, I have hereunto set my hand and official seal this
_____ day of _____ , _____

(Notary Seal)

My commission expires: _____
Notary Public, State of Florida

_____ _____
(Date) *(Print, type or stamp name of notary public)*

☐ Personally known to me ☐ Produced ID _____
(Type of ID, if applicable)

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

RELATED DOCUMENTS

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

PROJECT DESCRIPTION

The Project, in general, consists of the replacement of the existing Gymnasium Bleachers. The project is located at Southwestern Middle School, 605 W. New Hampshire Avenue, DeLand, Florida 32720.

Proposed improvements to the subject property are as depicted on drawings prepared by Group 942 Architecture, P.A. and associated consultants retained either by Group 942 Architecture, P.A. or Others.

The Site Work consists of: N/A.

The Structure Work includes Cutting and Patching, Field Engineering, Selective Demolition, Joint Sealants, Painting, Telescoping Bleachers, Electrical and other associated Work.

CONTRACTOR USE OF PREMISES

General: During the construction period the Contractor shall have full use of the premises for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to perform construction operations with its own forces or to employ separate contractors on portions of the project.

Driveways and Entrances: Keep driveways and entrances serving the premises and Building clear and available to the Owner, the Owner’s employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

END OF SECTION 01010

SECTION 01027 - APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

The Contractor's Construction Schedule and Submittal Schedule are included in Section "Submittals".

SCHEDULE OF VALUES

Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.

Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case submit the final version later than 7 days before the date scheduled for submittal of the initial Application for Payment. Include enough time for review(s) and resubmitting to the Architect.

Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values. If sections are not identified in the Project Manual, use CSI Standard Divisions, and/or sections divided into trades and identifiable milestones. Resubmit as needed until the schedule of values is acceptable to the Owner and Architect.

Identification: Include the following Project identification on the Schedule of Values:

Project name and location.
Name of the Architect.
Project number.
Contractor's name and address.
Date of submittal.

Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports.
Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum.
For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

Unit Cost Allowances: Show line item value of unit cost allowances as a product of unit cost times measured quantity as estimated from the best indication in the Contract Documents.

Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the

Schedule of Values and Applications for Payment shall be complete including its total cost and proportionate share of general overhead and profit margin.

At the Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.

Schedule Updating: Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Change orders shall become separate line items, included at the end of the Schedule of Values and the Application for Payment.

APPLICATIONS FOR PAYMENT:

Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.

The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

Payment Application Times: Each progress payment date is as indicated in the Agreement. The period of construction Work covered by each Application or Payment is the period indicated in the Agreement.

Payment Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Application for Payment.

Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.

Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

Transmittal: Submit 3 executed copies of each Application for Payment to the Architect by means ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.

Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Architect.

Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who may lawfully be entitled to file a mechanics lien arising out of the Contract, and related to the Work covered by the payment.

Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of Work covered by the application who could lawfully be entitled to a lien.

Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to Owner.

Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:

List of subcontractors.
List of principal suppliers and fabricators.
Schedule of Values.
Contractor's Construction Schedule (preliminary if not final).
Schedule of unit prices.
Submittal Schedule (preliminary if not final).
Copies of building permits
Copies of authorizations and licenses from governing authorities for performance of the Work.
Initial progress report.
Report of pre-construction meeting.
Certificates of insurance and insurance policies.
Performance and payment bonds (if required).

Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:

Completion of Project closeout requirements.
Completion of items specified for completion after Substantial Completion.
Assurance that unsettled claims will be settled. Assurance that Work not complete and accepted will be completed without undue delay.
Transmittal of required Project construction records to Owner.
Certified property survey.
Proof that taxes, fees and similar obligations have been paid.
Removal of temporary facilities and services.
Removal of surplus materials, rubbish and similar elements.
Change of door locks to Owner's access.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01027

SECTION 01030 - ALTERNATES

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This section specifies administrative and procedural requirements for Alternates.

Definition: An Alternate is an amount proposed by Bidders and stated on the Proposal Form for certain construction activities defined in the Bidding Requirements that may be added to or deducted from Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

Coordination: Coordinate related Work and modify or adjust adjacent Work as necessary to ensure that Work affected by each accepted Alternate is complete and fully integrated into the Project.

Notification: Immediately following the Award of the Contract, prepare and distribute to each party involved, notification of the status of each Alternate. Indicate whether Alternates have been accepted, rejected, or deferred for consideration at a later date. Include a complete description of negotiated modifications to Alternates.

Schedule: A “Schedule of Alternates” is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve the Work described under each Alternate.

Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

PART 2 – PRODUCTS (Not Applicable).

PART 3 – EXECUTION

SCHEDULE OF ALTERNATES

Alternate No. 1: Provide additive cost to include:

a) Strip and Paint the Underside of the Existing Continuous Roof Deck Support Angle at the North and South Walls of the Existing Gymnasium Building, Room 5.001. See plans.

END OF SECTION 01030

SECTION 01040 - PROJECT COORDINATION

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

Coordination.
Administrative and supervisory personnel.
General installation provisions.
Cleaning and protection.
Installation of equipment furnished by others.

COORDINATION

Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

Make adequate provisions to accommodate items scheduled for later installation.

Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

Preparation of schedules.
Installation and removal of temporary facilities.
Delivery and processing of submittals.
Progress meetings.

Project Close-out activities.

Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

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

SUBMITTALS

Staff Names: Within 15 days of Notice to Proceed, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

GENERAL INSTALLATION PROVISIONS

Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

Check, Recheck and Recheck measurements and dimensions, before starting each installation.

Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

CLEANING AND PROTECTION

During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

Limiting Exposures: Supervise construction activities 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. Where applicable, such exposures include, but are not limited to, the following:

Excessive static or dynamic loading.
Excessive internal or external pressures.
Excessively high or low temperatures.
Thermal shock.
Excessively high or low humidity.
Air contamination or pollution.
Water.
Solvents.
Chemicals.
Light.
Puncture.
Abrasion.
Heavy traffic.
Soiling, staining and corrosion.
Bacteria.
Rodent and insect infestation.
Combustion.
Electrical current.
High speed operation,
Improper lubrication,
Unusual wear or other misuse.
Contact between incompatible materials.
Destructive testing.
Misalignment.
Excessive weathering.
Unprotected storage.
Improper shipping or handling.
Theft.
Vandalism.

END OF SECTION 01040

SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies administrative and procedural requirements for cutting and patching.

Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

Requirements of this Section apply to mechanical and electrical installations. Refer to Division-15 and Division-16 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

SUBMITTALS

Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:

Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.

Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.

List products to be used and firms or entities that will perform Work.

Indicate dates when cutting and patching is to be performed.

List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.

Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

QUALITY ASSURANCE

Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:

Foundation construction.
Bearing and retaining walls.
Structural concrete.
Structural steel.
Lintels.
Timber and primary wood framing.
Structural decking.
Stair systems.
Miscellaneous structural metals.
Exterior curtain wall construction.
Equipment supports.
Piping, ductwork, vessels and equipment.

Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

MATERIALS
Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

INSPECTION

Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

PREPARATION

Temporary Support: Provide temporary support of Work to be cut.

Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

PERFORMANCE

General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.

Comply with requirements of applicable Sections of Division-2 where cutting and patching requires excavating and backfilling.

By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

CLEANING

Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 01045

SECTION 01095 - REFERENCE STANDARDS AND DEFINITIONS

PART 1 - GENERAL

RELATED DOCUMENTS

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

DEFINITIONS

General: Basic contract definitions are included in the Conditions of the Contract.

"Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference. Location is not limited.

"Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.

"Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.

"Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

"Furnish": The term "furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

"Install": The term "install" describes operations at the Project site including the actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

"Provide": The term "provide" means to furnish and install, complete and ready for the intended use.

"Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, who performs a particular construction activity including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.

The term "experienced," when used with the term "installer," means having successfully completed a minimum of 5 previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople

of the corresponding generic name.

Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.

This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

"Project site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing work as part of the Project. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

"Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

SPECIFICATION FORMAT AND CONTENT EXPLANATION

Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 16-division format and "MasterFormat" numbering system.

Specification Content: These Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words shall be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.

Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

INDUSTRY STANDARDS

Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

Publication Dates: Comply with the standards in effect as of the date of the Contract Documents.

Conflicting Requirements: Where compliance with 2 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 the Architect for a decision before proceeding.

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 the requirements. Refer uncertainties to the Architect for a decision before proceeding.

Copies of Standards: Each entity engaged in construction on the Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available on request.

Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Gale Research Inc.'s "Encyclopedia of Associations," which is available in most libraries.

Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following abbreviations and acronyms, as referenced in the Contract Documents, mean the associated names. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association 900 19th St., NW, Suite 300 Washington, DC 20006	(202) 862-5100
AABC	Associated Air Balance Council 1518 K St., NW Washington, DC 20005	(202) 737-0202
AAMA	American Architectural Manufacturers Assoc. 1540 E. Dundee Road, Suite 310 Palatine, IL 60067	(708) 202-1350
AAN	American Association of Nurserymen 1250 I St., NW, Suite 500 Washington, DC 20005	(202) 789-2900
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol St., Suite 249 Washington, DC 20001	(202) 624-5800

AATCC	American Association of Textile Chemists and Colorists P.O. Box 12215 One Davis Dr. Research Triangle Park, NC 27709-2215	(919) 549-8141
ABMA	American Bearing Manufacturers Assoc. 1200 19th St., Suite 300 Washington, DC 20036	(202) 429-5155
ABMA	American Boiler Manufacturers Association 950 North Glebe Rd., Suite 160 Arlington, VA 22203	(703) 522-7350
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI 48219	(313) 532-2600
ACIL	American Council of Independent Laboratories 1629 K St., NW Washington, DC 20006	(202) 887-5872
ACPA	American Concrete Pipe Association 8618 Westwood Center Dr., Suite 105 Vienna, VA 22182	(703) 821-1990
ADC	Air Diffusion Council 11 South LaSalle St., Suite 1400 Chicago, IL 60603	(312) 201-0101
AFBMA	Anti-Friction Bearing Manufacturers Assoc. (Now ABMA)	
AFPA	American Forest and Paper Association 1111 19th St., NW, Suite 800 Washington, DC 20036	(202) 463-2455
AGA	American Gas Assoc. 1515 Wilson Blvd. Arlington, VA 22209	(703) 841-8400
AHA	American Hardboard Assoc. 1210 W. Northwest Highway Palatine, IL 60067	(708) 934-8800
AHAM	Association of Home Appliance Manufacturers 20 N. Wacker Dr., Suite 1500 Chicago, IL 60606	(312) 984-5800

AI	Asphalt Institute Research Park Dr. P.O. Box 14052 Lexington, KY 40512-4052	(606) 288-4960
AIA	The American Institute of Architects 1735 New York Ave., NW Washington, DC 20006	(202) 626-7300
AIA	American Insurance Assoc. 1130 Connecticut Ave., NW, Suite 1000 Washington, DC 20036	(202) 828-7100
AIHA	American Industrial Hygiene Assoc. 2700 Prosperit Ave., Suite 250 Fairfax, VA 22031	(703) 849-8888
AISC	American Institute of Steel Construction One East Wacker Dr., Suite 3100 Chicago, IL 60601-2001	(312) 670-2400
AISI	American Iron and Steel Institute 1101 17th St., NW Washington, DC 20036-4700	(202) 452-7100
AITC	American Institute of Timber Construction 7012 S. Revere Pkwy, Suite 140 Englewood, CO 80112	(303) 792-9559
ALA	American Laminators Association 419 Norton Building Seattle, WA 98104-1584	(206) 622-0666
ALI	Associated Laboratories, Inc. c/o HOH Chemicals 500 S. Vermont St. Palatine, IL 60067	(708) 358-7400
ALSC	American Lumber Standards Committee P.O. Box 210 Germantown, MD 20875	(301) 972-1700
AMCA	Air Movement and Control Assoc. 30 W. University Dr. Arlington Heights, IL 60004-1893	(708) 394-0150
ANSI	American National Standards Institute 11 West 42nd St., 13th Floor New York, NY 10036	(212) 642-4900
AOAC	AOAC International 2200 Wilson Blvd., Suite 400 Arlington, VA 22201-3301	(703) 522-3032

AOSA	Association of Official Seed Analysts 201 N. 8th St., Suite 400 P.O. Box 81152 Lincoln, NE 68501-1151	(402) 476-3852
APA	APA-The Engineered Wood Association (Formerly American Plywood Assoc.) P.O. Box 11700 Tacoma, WA 98411	(206) 565-6600
API	American Petroleum Institute 1220 L St., NW Washington, DC 20005	(202) 682-8000
ARI	Air-Conditioning and Refrigeration Institute 4301 Fairfax Dr., Suite 425 Arlington, VA 22203	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Assoc. 6000 Executive Dr., Suite 201 Rockville, MD 20852-3803	(301) 231-9050
ASA	Acoustical Society of America 500 Sunnyside Blvd. Woodbury, NY 11797	(516) 576-2360
ASC	Adhesive and Sealant Council 1627 K St., NW, Suite 1000 Washington, DC 20006-1707	(202) 452-1500
ASCE	American Society of Civil Engineers 345 East 47th St. New York, NY 10017-2398	(800) 548-2723
ASHE	American Society for Healthcare Engineering One North Franklin Chicago, IL 60606	(800) AHA-2626 (312) 422-3811
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329-2305	(800) 527-4723
ASME	American Society of Mechanical Engineers 345 East 47th St. New York, NY 10017	(212) 705-7722
ASPA	American Sod Producers Assoc.	

	(Now TPI)	
ASPE	American Society of Plumbing Engineers 3617 Thousand Oaks Blvd., Suite 210 Westlake Village, CA 91362	(805) 495-7120
ASSE	American Society of Sanitary Engineering P.O. Box 40362 Bay Village, OH 44140	(216) 835-3040
ASTM	American Society for Testing and Materials 100 Barr Harbor Dr. West Conshohocken, PA 19428	(610) 832-9585
ATIS	Alliance for Telecommunications Industry Solutions 1200 G St., NW, Suite 500 Washington, DC 20005	(202) 628-6380
AWCMA	American Window Covering Manufacturers Assoc. (Now WCMA)	
AWI	Architectural Woodwork Institute P.O. Box 1550 13924 Braddock Rd., No. 100 Centerville, VA 22020	(703) 222-1100
AWPA	American Wood Preservers' Assoc. P.O. Box 286 Woodstock, MD 21163-0286	(410) 465-3169
AWPB	American Wood Preservers' Bureau (This organization is now defunct.)	
AWS	American Welding Society 550 LeJeune Rd., NW Miami, FL 33126	(305) 443-9353
AWWA	American Water Works Assoc. 6666 W. Quincy Ave. Denver, CO 80235	(303) 794-7711
BANC	Brick Association of North Carolina P.O. Box 13290 Greensboro, NC 27415-3290	(910) 273-5566
BHMA	Builders Hardware Manufacturers Assoc. 355 Lexington Ave., 17th Floor New York, NY 10017-6603	(212) 661-4261
BIA	Brick Institute of America	

	11490 Commerce Park Dr. Reston, VA 22091-1525	(703) 620-0010
BIFMA	The Business and Institutional Furniture Manufacturer's Association 2680 Horizon Dr., SE, Suite A1 Grand Rapids, MI 49546-7500	(616) 285-3963
CAGI	Compressed Air and Gas Institute c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851	(216) 241-7333
CAUS	Color Association of the United States 409 W. 44th St. New York, NY 10036	(212) 582-6884
CBM	Certified Ballast Manufacturers Assoc. 1422 Euclid Ave., Suite 402 Cleveland, OH 44115-2851	(216) 241-0711
CCC	Carpet Cushion Council P.O. Box 546 Riverside, CT 06878	(203) 637-1312
CDA	Copper Development Association Inc. 260 Madison Av., 16th Floor New York, NY 10016	(800) 232-3282 (212) 251-7200
CFFA	Chemical Fabrics & Film Association, Inc. c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851	(216) 241-7333
CGA	Compressed Gas Assoc. 1725 Jefferson Davis Highway, Suite 1004 Arlington, VA 22202-4100	(703) 412-0900
CISCA	Ceiling and Interior Systems Construction Assoc. 579 W. North Ave., Suite 301 Elmhurst, IL 60126	(708) 833-1919
CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Rd., Suite 419 Chattanooga, TN 37421	(615) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute 1776 Massachusetts Ave., NW, Suite 500 Washington, DC 20036	(202) 659-3537

CRI	Carpet and Rug Institute P.O. Box 2048 Dalton, GA 30722-2048	(706) 278-0232
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Rd. Schaumburg, IL 60173-4758	(708) 517-1200
CTIOA	Ceramic Tile Institute of America 12061 West Jefferson Blvd. Culver City, CA 90230	(310) 574-7800
DHI	Door and Hardware Institute 14170 Newbrook Dr. Chantilly, VA 22021-2223	(703) 222-2010
DIPRA	Ductile Iron Pipe Research Assoc. 245 Riverchase Parkway East, Suite O Birmingham, AL 35244	(205) 988-9870
DLPA	Decorative Laminate Products Assoc. 13924 Braddock Rd. Centreville, VA 22020	(800) 684-3572
ECSA	Exchange Carriers Standards Assoc. (Now ATIS)	
EIA	Electronic Industries Assoc. 2001 Pennsylvania Ave., NW Washington, DC 20006-1813	(202) 457-4900
EIMA	EIFS Industry Manufacturers Assoc. 2759 State Road 580, Suite 112 Clearwater, FL 34621	(813) 726-6477
EJMA	Expansion Joint Manufacturers Assoc. 25 N. Broadway Tarrytown, NY 10591	(914) 332-0040
ETL	ETL Testing Laboratories, Inc. c/o Inchcape Testing Services P.O. Box 2040 3933 Route 11, Industrial Park Cortland, NY 13045	(800) 345-3851 (607) 753-6711
FCI	Fluid Controls Institute c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851	(216) 241-7333
FCICA	Floor Covering Installation Contractors	

	Assoc. (Formerly Floor Covering Installation Board) P.O. Box 948 Dalton, GA 30722-0948	(706) 226-5488
FGMA	Flat Glass Marketing Assoc. (Now GANA)	
FM	Factory Mutual 1151 Boston-Providence Turnpike P.O. Box 9102 Norwood, MA 02062	(617) 762-4300
FTI	Facing Tile Institute P.O. Box 8880 Canton, OH 44711	(216) 488-1211
GA	Gypsum Association 810 First St., NE, Suite 510 Washington, DC 20002	(202) 289-5440
GANA	Glass Association of North America 3310 SW Harrison St. Topeka, KS 66611-2279	(913) 266-7013
HEI	Heat Exchange Institute c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851	(216) 241-7333
HI	Hydraulic Institute 9 Sylvan Way Parsippany, NJ 07054-3802	(201) 267-9700
HI	Hydronics Institute P.O. Box 218 35 Russo Place Berkeley Heights, NJ 07922	(908) 464-8200
HMA	Hardwood Manufacturers Assoc. 400 Penn Center Blvd. Pittsburgh, PA 15235	(412) 829-0770
HPVA	Hardwood Plywood and Veneer Assoc. 1825 Michael Farraday Dr. P.O. Box 2789 Reston, VA 22090-0789	(703) 435-2900
IBD	Institute of Business Designers 341 Merchandise Mart Chicago, IL 60654	(312) 467-1950

ICEA	Insulated Cable Engineers Association, Inc. P.O. Box 440 South Yarmouth, MA 02664	(508) 394-4424
IEC	International Electrotechnical Commission (Available from ANSI) 11 West 42nd St., 13th Floor New York, NY 10036	(212) 642-4900
IEEE	Institute of Electrical and Electronic Engineers 345 E. 47th St. New York, NY 10017	(212) 705-7900
IESNA	Illuminating Engineering Society of North America 120 Wall St., Floor 17 New York, NY 10005-4001	(212) 248-5000
IGCC	Insulating Glass Certification Council c/o ETL Testing Laboratories, Inc. P.O. Box 2040 Route 11, Industrial Park Cortland, NY 13045	(607) 753-6711
ILI	Indiana Limestone Institute of America Stone City Bank Building, Suite 400 Bedford, IN 47421	(812) 275-4426
IMSA	International Municipal Signal Assoc. 165 E. Union St. Newark, NY 14513	(315) 331-2182
IRI	Industrial Risk Insurers P.O. Box 5010 85 Woodland St. Hartford, CT 06102-5010	(203) 520-7300
ISA	Instrument Society of America P.O. Box 12277 67 Alexander Dr. Research Triangle Park, NC 27709	(919) 549-8411
KCMA	Kitchen Cabinet Manufacturers Assoc. 1899 Preston White Dr. Reston, VA 22091-4326	(703) 264-1690
LGSI	Light Gage Structural Institute P.O. Box 866301 Plano, TX 75086-6301	(214) 618-3977

LIA	Lead Industries Association, Inc. 295 Madison Ave. New York, NY 10017	(212) 578-4750
LPI	Lightning Protection Institute 3365 N. Arlington Heights Rd., Suite J Arlington Heights, IL 60004	(800) 488-6864
MBMA	Metal Building Manufacturer's Assoc. c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851	(216) 241-7333
MCAA	Mechanical Contractors Association of America 1385 Piccard Dr. Rockville, MD 20850-4329	(301) 869-5800
MFMA	Maple Flooring Manufacturers Assoc. 60 Revere Dr., Suite 500 Northbrook, IL 60062	(708) 480-9138
MIA	Marble Institute of America 30 Eden Alley, Suite 201 Columbus, OH 43215	(614) 228-6194
MIA	Masonry Institute of America 2550 Beverly Blvd. Los Angeles, CA 90057	(213) 388-0472
ML/SFA	Metal Lath/Steel Framing Assoc. (A Division of the NAAMM) 11 South LaSalle St., Suite 1400 Chicago, IL 60603	(312) 201-0101
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry 127 Park St., NE Vienna, VA 22180-4602	(703) 281-6613
NAA	National Arborist Assoc. The Meeting Place Mall Route 101, P.O. Box 1094 Amherst, NH 03031-1094	(603) 673-3311
NAAMM	National Association of Architectural Metal Manufacturers 11 South LaSalle St., Suite 1400 Chicago, IL 60603	(312) 201-0101
NAIMA	North American Insulation Manufacturers Assoc. 44 Canal Center Plaza, Suite 310	

	Alexandria, VA 22314	(703) 684-0084
NAPA	National Asphalt Pavement Assoc. NAPA Building 5100 Forbes Blvd. Lanham, MD 20706-4413	(301) 731-4748
NAPF	National Association of Plastic Fabricators (Now DLPA)	
NBGQA	National Building Granite Quarries Assoc., Inc. c/o Rock of Ages 369 N. State St. Concord, NH 03301	(800) 884-7936 (603) 225-8397
NBHA	National Builders Hardware Assoc. (Now DHI)	
NCMA	National Concrete Masonry Assoc. 2302 Horse Pen Rd. Herndon, VA 22071-3499	(703) 713-1900
NCPI	National Clay Pipe Institute P.O. Box 759 253-80 Center St. Lake Geneva, WI 53147	(414) 248-9094
NCRPM	National Council on Radiation Protection and Measurements 7910 Woodmont Ave., Suite 800 Bethesda, MD 20814	(301) 657-2652
NCSPA	National Corrugated Steel Pipe Association 1255 23rd St., NW, Suite 850 Washington, DC 20037	(202) 452-1700
NEC	National Electrical Code (Available from NFPA)	
NECA	National Electrical Contractors Assoc. 3 Bethesda Metro Center, Suite 1100 Bethesda, MD 20814-5372	(301) 657-3110
NEII	National Elevator Industry, Inc. 185 Bridge Plaza, North Fort Lee, NJ 07024	(201) 944-3211

NELMA	Northeastern Lumber Manufacturers Assoc. 272 Tuttle Rd. P.O. Box 87A Cumberland Center, ME 04021	(207) 829-6901
NEMA	National Electrical Manufacturers Assoc. 2101 L St., NW, Suite 300 Washington, DC 20037	(202) 457-8400
NETA	International Electrical Testing Assoc. P.O. Box 687 Morrison, CO 80465-1526	(303) 697-8441
NFPA	National Fire Protection Assoc. One Batterymarch Park P.O. Box 9101 Quincy, MA 02269-9101	(800) 344-3555 (617) 770-3000
NFPA	National Forest Products Assoc. (Now AFPA)	
NHLA	National Hardwood Lumber Assoc. P.O. Box 34518 Memphis, TN 38184-0518	(901) 377-1818
NKCA	National Kitchen Cabinet Assoc. (Now KCMA)	
NLGA	National Lumber Grades Authority 103-4400 Dominion St. Burnaby, BC V5G 4G3 CANADA	(604) 451-7323
NOFMA	National Oak Flooring Manufacturers Assoc. P.O. Box 3009 Memphis, TN 38173-0009	(901) 526-5016
NPA	National Particleboard Assoc. 18928 Premiere Ct. Gaithersburg, MD 20879-1569	(301) 670-0604
NPCA	National Paint and Coatings Assoc. 1500 Rhode Island Ave., NW Washington, DC 20005	(202) 462-6272
NRCA	National Roofing Contractors Assoc. O'Hare International Center 10255 W. Higgins Rd., Suite 600 Rosemont, IL 60018-5607	(708) 299-9070

NSF	NSF International (Formerly National Sanitation Foundation) 3475 Plymouth Rd. P.O. Box 130140 Ann Arbor, MI 48113-0140	(313) 769-8010
NSSEA	National School Supply and Equipment Assoc. 8300 Colesville Rd., No. 250 Silver Spring, MD 20910	(301) 495-0240
NTMA	National Terrazzo and Mosaic Assoc. 3166 Des Plaines Ave., Suite 132 Des Plaines, IL 60018	(708) 635-7744
NWMA	National Woodwork Manufacturers Assoc. (Now NWWDA)	
NWWDA	National Wood Window and Door Assoc. 1400 E. Touhy Ave., #G54 Des Plaines, IL 60018	(800) 223-2301 (708) 299-5200
PATMI	Power Actuated Tool Manufacturers' Institute, Inc. 1000 Fairgrounds Rd., Suite 200 St. Charles, MO 63301	(314) 947-6610
PCA	Portland Cement Assoc. 5420 Old Orchard Rd. Skokie, IL 60077-1083	(708) 966-6200
PCI	Precast/Prestressed Concrete Institute 175 W. Jackson Blvd. Chicago, IL 60604	(312) 786-0300
PDI	Plumbing and Drainage Institute c/o Sol Baker 1106 W. 77th St., South Dr. Indianapolis, IN 46260	(317) 251-6970
PEI	Porcelain Enamel Institute 102 Woodmont Center, Suite 360 Nashville, TN 37205	(615) 385-0758
PIMA	Polyisocyanurate Insulation Manufacturers Association 1001 Pennsylvania Ave., NW 5th Floor North Washington, DC 20004	(202) 624-2709

RFCI	Resilient Floor Covering Institute 966 Hungerford Dr., Suite 12-B Rockville, MD 20850	(301) 340-8580
RIS	Redwood Inspection Service 405 Enfrente Dr., Suite 200 Novato, CA 94949	(415) 382-0662
RMA	Rubber Manufacturers Assoc. 1400 K St., NW Washington, DC 20005	(202) 682-4800
SAE	SAE International 400 Commonwealth Dr. Warrendale, PA 15096-0001	(412) 776-4841
SDI	Steel Deck Institute P.O. Box 9506 Canton, OH 44711	(216) 493-7886
SDI	Steel Door Institute 30200 Detroit Rd. Cleveland, OH 44145-1967	(216) 889-0010
SEFA	Scientific Equipment and Furniture Assoc. 1028 Duchess Dr. McLean, VA 22102	(703) 790-8661
SGCC	Safety Glazing Certification Council c/o ETL Testing Laboratories U.S. Route 11, Industrial Park P.O. Box 2040 Cortland, NY 13045	(607) 753-6711
SHLMA	Southern Hardwood Lumber Manufacturers Assoc. (Now HMA)	
SIGMA	Sealed Insulating Glass Manufacturers Assoc. 401 N. Michigan Ave. Chicago, IL 60611	(312) 644-6610
SJI	Steel Joist Institute 1205 48th Avenue North, Suite A Myrtle Beach, SC 29577-5424	(803) 449-0487
SMA	Screen Manufacturers Assoc. 3950 Lake Shore Dr., Suite 502-A Chicago, IL 60613-3431	(312) 525-2644

SMACNA	Sheet Metal and Air Conditioning Contractors' National Assoc. 4201 Lafayette Center Dr. P.O. Box 221230 Chantilly, VA 22022-1230	(703) 803-2980
SPIB	Southern Pine Inspection Bureau 4709 Scenic Highway Pensacola, FL 32504-9094	(904) 434-2611
SPRI	SPRI (Formerly Single Ply Roofing Institute) 175 Highland Ave. Needham, MA 02194	(617) 444-0242
SSIUS	Specialty Steel Industry of the United States 3050 K St., NW Washington, DC 20007	(202) 342-8630
SSPC	Steel Structures Painting Council 4516 Henry St. Pittsburgh, PA 15213	(412) 687-1113
SSPMA	Sump and Sewage Pump Manufacturers Assoc. P.O. Box 647 Northbrook, IL 60065-0647	(708) 559-9233
STI	Steel Tank Institute 570 Oakwood Rd. Lake Zurich, IL 60047	(708) 438-8265
SWI	Steel Window Institute c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851	(216) 241-7333
SWPA	Submersible Wastewater Pump Assoc. 1806 Johns Dr. Glenview, IL 60025-1657	(798) 729-7972
TCA	Tile Council of America 511 Westinghouse Rd. Pendleton, SC 29670	(803) 646-4021
	P.O. Box 1787 Clemson, SC 29633	
TIMA	Thermal Insulation Manufacturers Assoc. (Now NAIMA)	
TPI	Truss Plate Institute	

	583 D'Onofrio Dr., Suite 200 Madison, WI 53719	(608) 833-5900
TPI	Turfgrass Producers International (Formerly American Sod Producers Assoc.) 1855-A Hicks Rd. Rolling Meadows, IL 60008	(800) 405-8873
UL	Underwriters Laboratories 333 Pfingsten Rd. Northbrook, IL 60062-2096	(708) 272-8800
UNI	Uni-Bel PVC Pipe Assoc. 2655 Villa Creek Dr., Suite 155 Dallas, TX 75234	(214) 243-3902
USP	U.S. Pharmacopeia (Formerly U.S. Pharmacopoeial Convention) 12601 Twinbrook Pkwy Rockville, MD 20852	(301) 881-0666
WA	Wallcoverings Assoc. 401 N. Michigan Ave. Chicago, IL 60611-4267	(312) 644-6618
WCLIB	West Coast Lumber Inspection Bureau P.O. Box 23145 Portland, OR 97281	(503) 639-0651
WCMA	Window Covering Manufacturers Assoc. 355 Lexington Ave., 17th Floor New York, NY 10017	(212) 661-4261
WIC	Woodwork Institute of California 3164 Industrial Blvd. P.O. Box 980247 West Sacramento, CA 95798-0247	(916) 372-9943
WMMPA	Wood Moulding & Millwork Producers Assoc. P.O. Box 25278 Portland, OR 97225	(503) 292-9288
WRI	Wire Reinforcement Institute 1101 Connecticut Ave. NW, Suite 700 Washington, DC 20036-4303	(202) 429-5125
WSC	Water Systems Council Building C, Suite 20 800 Roosevelt Rd. Glen Ellyn, IL 60137	(708) 545-1762
WSFI	Wood and Synthetic Flooring Institute (Now MFMA)	

WWCA	Western Wall and Ceiling Assoc. (Formerly Western Lath, Plaster, Drywall Industries Assoc.) 7571 Mission Gorge Rd. San Diego, CA 92120	(619) 229-8307
WWPA	Western Wood Products Assoc. Yeon Building 522 SW 5th Ave. Portland, OR 97204-2122	(503) 224-3930
WWPA	Woven Wire Products Assoc. 4940 Elmgate Dr. Orchard Lake, MI 48324	(810) 681-1055

Federal Government Agencies: Names and titles of Federal Government standards- or specification-producing agencies are often abbreviated. The following abbreviations and acronyms referenced in the Contract Documents indicate names of standards- or specification-producing agencies of the Federal Government. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.

CE	Corps of Engineers (U.S. Department of the Army) Chief of Engineers General Information Referral 20 Massachusetts Ave., NW Washington, DC 20314	(202) 761-0660
CFR	Code of Federal Regulations (Available from the Government Printing Office) 732 N. Capitol St., NW Washington, DC 20401 (Material is usually published first in the "Federal Register.")	(202) 512-0000
CPSC	Consumer Product Safety Commission East West Towers 4330 East-West Hwy Bethesda, MD 20814	(800) 638-2772
CS	Commercial Standard (U.S. Department of Commerce) Government Printing Office Washington, DC 20402	(202) 512-0000
DOC	Department of Commerce 14th St. and Constitution Ave., NW Washington, DC 20230	(202) 482-2000
DOT	Department of Transportation	

	400 Seventh St., SW Washington, DC 20590	(202) 366-4000
EPA	Environmental Protection Agency 401 M St., SW Washington, DC 20460	(202) 260-2090
FAA	Federal Aviation Administration (U.S. Department of Transportation) 800 Independence Ave., SW Washington, DC 20591	(202) 366-4000
FCC	Federal Communications Commission 1919 M St., NW Washington, DC 20554	(202) 418-0126
FDA	Food and Drug Administration 5600 Fishers Lane Rockville, MD 20857	(301) 443-1544
FHA	Federal Housing Administration (U.S. Department of Housing and Urban Development) 451 Seventh St., SW Washington, DC 20410	(202) 708-1112
FS	Federal Specification Unit (Available from GSA) 470 East L'Enfant Plaza, SW, Suite 8100 Washington, DC 20407	(202) 755-0325
GSA	General Services Administration F St. and 18th St., NW Washington, DC 20405	(202) 708-5082
MIL	Military Standardization Documents (U.S. Department of Defense) Defense Printing Service 700 Robbins Ave., Building 4D Philadelphia, PA 19111	(215) 697-2179
NIST	National Institute of Standards and Technology (U.S. Department of Commerce) Building 101, #A1134 Rte. I-270 and Quince Orchard Rd. Gaithersburg, MD 20899	(301) 975-2000
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor) 200 Constitution Ave., NW	

	Washington, DC 20210	(202) 219-5000
PS	Product Standard of NBS (U.S. Department of Commerce) Government Printing Office Washington, DC 20402	(202) 512-0000
RUS	Rural Utilities Service (Formerly Rural Electrification Administration) (U.S. Department of Agriculture) 14th St. and Independence Ave., SW Washington, DC 20250	(202) 720-9560
USDA	U.S. Department of Agriculture 14th St. and Independence Ave., SW Washington, DC 20250	(202) 720-8732
USPS	U.S. Postal Service 475 L'Enfant Plaza, SW Washington, DC 20260-0010	(202) 268-2000

State Government Agencies: The following state government agency produces standards referenced in the Contract Documents:

CBHF	State of California, Dept. of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation Technical Information 3485 Orange Grove Ave. North Highland, CA 95660-5595	(916) 574-2041

GOVERNING REGULATIONS AND AUTHORITIES

Copies of Regulations: Obtain copies of the following regulations and retain at the Project site to be available for reference by parties who have a reasonable need.

SUBMITTALS

Permits, Licenses, and Certificates: For the 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.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01095

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including;

Contractor's construction schedule.
Submittal schedule.
Daily construction reports.
Shop Drawings.
Product Data.
Samples.

Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

Permits.
Applications for payment.
Performance and payment bonds.
Insurance certificates.
List of Subcontractors.

SUBMITTAL PROCEDURES

Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.

Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect will promptly advise the Contractor when a submittal being processed must be delayed for coordination.

If an intermediate submittal is necessary, process the same as the initial submittal.

Allow two weeks for reprocessing each submittal.

No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.

Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

Provide space on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

Include the following information on the label for processing and recording action taken.

Project name.
Date.
Number and title of appropriate Specification Section.
Drawing number and detail references, as appropriate.

Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.

On the transmittal Record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

Transmittal Form: Use AIA Document G 810 or Contractor's Standard form.

CONTRACTOR'S CONSTRUCTION SCHEDULE

Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart type Contractor's construction schedule. Submit within 15 days of the date established for "Commencement of the Work".

Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values".

Within each time bar indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.

Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.

Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the Work.

Coordinate the Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests and other schedules.

Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.

Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.

Area Separations: Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities. Major portions of the work include site utilities, stormwater management structures, paving, four separate buildings, irrigation, landscaping and site lighting.

Cost Correlation: At the head of the schedule, provide a two item cost correlation line, indicating "precalculated" and "actual" costs. On the line show dollar-volume of Work performed as of the dates used for preparation of payment requests.

Refer to Section "Applications for Payment" for cost reporting and payment procedures.

Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

When revisions are made, distribute 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 construction activities.

Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

SUBMITTAL SCHEDULE

After development and acceptance of the Contractor's construction schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of the Contractor's construction schedule.

Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.

Prepare the schedule in chronological order; include submittals required during the first 90 days of construction. Provide the following information:

Scheduled date for the first submittal.
Related Section number.
Name of subcontractor.
Description of the part of the Work covered.
Scheduled date the Architect's final release or approval.

Distribution: Following response to initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.

When revisions are made, distribute 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 construction activities.

Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

DAILY CONSTRUCTION REPORTS

Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Construction Manager at weekly intervals:

List of subcontractors at the site.
Approximate count of personnel at the site.
High and low temperatures, general weather conditions.
Accidents and unusual events.
Meetings and significant decisions.
Stoppages, delays, shortages, losses.
Meter readings and similar recordings.
Emergency procedures.
Orders and requests of governing authorities.
Change Orders received, implemented.
Services connected, disconnected.
Equipment or system tests and start-ups.
Partial Completions, occupancies.
Substantial Completions authorized.

SHOP DRAWINGS

Submit newly prepared information, drawn to accurate scale. **Highlight, encircle, or otherwise indicate deviations from the Contract Documents.** Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

Dimensions.
Identification of products and materials included.
Compliance with specified standards.
Notation of coordination requirements.
Notation of dimensions established by field measurement.
Color selections required.

Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 30" x 42".

Submit 3 blue- or black-line prints; submit 5 prints where required for maintenance manuals and/or engineer's review. A minimum of 2 prints, and a maximum of 3 prints will be retained; the remainder will be returned.

One of the prints returned shall be marked-up and maintained as a "Record Document" by the Contractor.

Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

PRODUCT DATA

Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

Manufacturer's printed recommendations.
Compliance with recognized trade association standards.
Compliance with recognized testing agency standards.
Application of testing agency labels and seals.
Notation of dimensions verified by field measurement.
Notation of coordination requirements.
Color selection data.

Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

Submittals: Submit 4 copies of each required submittal; submit 5 copies where required for maintenance manuals and/or engineer’s review. The Architect will retain up to 3 copies, and will return the others marked with action taken and corrections or modifications required.

Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.

Do not permit use of unmarked copies of Product Data in connection with construction.

SAMPLES

Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or

fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Architect's Sample. Include the following:

Generic description of the Sample.
Sample source.
Product name or name of manufacturer.
Compliance with recognized standards.
Availability and delivery time.
Color selection data.

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

Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.

Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.

Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.

Preliminary submittals will be reviewed and returned with the Architect's mark indicating selection and other action.

Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.

Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.

Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

Sample sets may be used to obtain final acceptance of the construction associated with each set.

Distribution of Samples: Prepare and distribute additional sets as required to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

ARCHITECT'S ACTION

Except for submittals for record, information or similar purposes, where action and return is required or requested, the Architect will review each submittal, mark to indicate action taken, and return promptly.

Compliance with specified characteristics is the Contractor's responsibility

Action Sheet: The Architect will issue an action sheet for each submittal with a self-explanatory action indicated therein. The sheet will be appropriately marked, as follows, to indicate the action taken:

Final Unrestricted Release: Where submittals are marked "No Exceptions Taken," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.

Final-But-Restricted Release: When submittals are marked "Note Markings," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.

Returned for Resubmittal: When submittal is marked "Rejected/Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.

Do not permit submittals marked "Rejected, Not Approved, Revise and Resubmit, and the like" to be used at the Project site, or elsewhere where Work is in progress.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION (Not Applicable).

END OF SECTION 01300

SECTION 01400 - QUALITY CONTROL SERVICES

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies administrative and procedural requirements for quality control services.

Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Architect.

Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.

Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.

Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.

Requirements for the Contractor to provide quality control services required by the Architect, Owner, Construction Manager or authorities having jurisdiction are not limited by provisions of this Section.

RESPONSIBILITIES

Contractor Responsibilities: The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the Contractor. Costs for these services shall be included in the Contract Sum.

The Contractor shall employ and pay an independent agency, to perform specified quality control services.

The Owner will engage the services of an independent agency to perform inspections and tests specified as the Owner's responsibilities. Payment for these services will be made from the Inspection and Testing Allowance, as authorized by Change Orders.

Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the Contractor is also required to engage an entity for the same or

related element, the Contractor shall not employ the entity engaged by the Owner, unless otherwise agreed in writing with the Owner.

Retesting: The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.

Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:

Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.

Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.

Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.

Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.

Security and protection of samples and test equipment at the Project site.

Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

SUBMITTALS

The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Architect, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.

Submit additional copies of each written report directly to the governing authority, when the authority so directs.

Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

Date of issue.

Project title and number.
Name, address and telephone number of testing agency.
Dates and locations of samples and tests or inspections.
Names of individuals making the inspection or test.
Designation of the Work and test method.
Identification of product and Specification Section.
Complete inspection or test data.
Test results and an interpretations of test results.
Ambient conditions at the time of sample-taking and testing.
Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
Name and signature of laboratory inspector.
Recommendations on retesting.

QUALITY ASSURANCE

Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.

Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

REPAIR AND PROTECTION

General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."

Protect construction exposed by or for quality control service activities, and protect repaired construction.

Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01400

SECTION 01500 - TEMPORARY FACILITIES

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

Temporary utilities required include but are not limited to:

Water service and distribution.
Temporary electric power and light.
Telephone service.
Storm and sanitary sewer.

Temporary construction and support facilities are soley at the Contractor's Option and are NOT required. If provided they shall include, but are not limited to:

Temporary Power. Temporary power shall be metered and provided by the Contractor).
Temporary heat.
Conditioned Field Office w/ phone & fax.
Storage sheds.
Sanitary facilities, including drinking water.
Dewatering facilities and drains.
Temporary enclosures.
Temporary Project identification signs and bulletin boards.
Waste disposal services.
Rodent and pest control.
Construction aids and miscellaneous services and facilities.

Security and protection facilities required include but are not limited to:

Temporary fire protection.
Barricades, warning signs, lights.
Environmental protection.
Temporary fencing.

SUBMITTALS

Temporary Utilities: Submit reports of tests, inspections, meter readings and similar procedures performed on temporary utilities.

Implementation and Termination Schedule: Submit a schedule indicating implementation and termination of each temporary utility within 15 days of the date established for commencement of the Work.

QUALITY ASSURANCE

Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:

Building Code requirements.
Health and safety regulations.
Utility company regulations.
Police, Fire Department and Rescue Squad rules.
Environmental protection regulations.

Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities."

Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.

Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).

Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

PROJECT CONDITIONS

Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.

Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

PART 2 - PRODUCTS

MATERIALS

General: Provide new materials; if acceptable to the Architect, undamaged previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.

Lumber and Plywood: Comply with requirements in Division-6 Section "Rough Carpentry."

For signs and directory boards, provide exterior type, Grade B-B High Density Concrete Form Overlay Plywood conforming to PS-1, of sizes and thickness indicated.

For fences and vision barriers, provide exterior type, minimum 3/8" thick plywood.

For safety barriers and similar uses, provide minimum 5/8" thick exterior plywood.

Paint: Comply with requirements of Division-9 Section "Finish Painting."

For job-built temporary offices, shops, sheds, fences and other exposed lumber and plywood, provide exterior grade acrylic-latex emulsion over exterior primer.

For sign panels and applying graphics, provide exterior grade alkyd gloss enamel over exterior primer.

Tarpaulins: Provide waterproof, fire-resistant, UL labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.

Water: Provide potable water approved by local health authorities.

Open-Mesh Fencing: Provide 11-gage, galvanized 2-inch, chain link fabric fencing 6-feet high with galvanized barbed wire top strand and galvanized steel pipe posts, 1-1/2" I.D. for line posts and 2-1/2" I.D. for corner posts.

EQUIPMENT

General: Provide new equipment; if acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.

Water Hoses: Provide 3/4" heavy-duty, abrasion-resistant, flexible rubber hoses 100 ft. long, with pressure rating greater than the maximum pressure of the water distribution system; provide adjustable shut-off nozzles at hose discharge.

Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.

Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.

Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.

Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.

Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.

First Aid Supplies: Comply with governing regulations.

Fire Extinguishers: Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.

Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

PART 3 - EXECUTION

INSTALLATION

Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

TEMPORARY UTILITY INSTALLATION

General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.

Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.

Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.

Obtain easements to bring temporary utilities to the site, where the Owner's easements cannot be used for that purpose.

Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Architect, and will not be accepted as a basis of claims for a Change Order.

Water Service: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.

Sterilization: Sterilize temporary water piping prior to use.

Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.

Power Distribution System: Install wiring overhead, and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, AC 20 ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.

Temporary Lighting: Whenever overhead floor or roof deck has been installed, provide temporary lighting with local switching.

Install and operate temporary lighting that will fulfill security and protection requirements, without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.

Temporary Telephones: Provide temporary telephone service for all personnel engaged in construction activities, throughout the construction period. Install telephone on a separate line for each temporary office and first aid station. Where an office has more than two occupants, install a telephone for each additional occupant or pair of occupants.

Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off the site in a lawful manner.

Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways before discharge.

Connect temporary sewers to the municipal system as directed by the sewer department officials.

Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.

Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.

Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.

Provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.

Heating Facilities: Except where use of the permanent system is authorized, provide vented self-contained LP gas or fuel oil heaters with individual space thermostatic control.

Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited.

Field Offices: Provide insulated, weathertight temporary offices of sufficient size to accommodate required office personnel at the Project site. Keep the office clean and orderly for use for small progress meetings. Furnish and equip offices as follows:

Furnish with a desk, conference table and chairs, a 4-drawer file cabinet, plan table and plan rack and a 6-shelf bookcase.

Equip with a water cooler and private toilet complete with water closet, lavatory and mirror-medicine cabinet unit.

Temporary Paving: Construct and maintain temporary roads and paving to adequately support the indicated loading and to withstand exposure to traffic during the construction period. Locate temporary paving for roads, storage areas and parking where the same permanent facilities will be located. Review proposed modifications to permanent paving with the Architect.

Paving: Comply with Division-2 Section "Asphalt Concrete Paving" for construction and maintenance of temporary paving.

Coordinate temporary paving development with subgrade grading, compaction, installation and stabilization of subbase, and installation of base and finish courses of permanent paving.

Install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas that are without damage or deterioration when occupied by the Owner.

Delay installation of the final course of permanent asphalt concrete paving until immediately before Substantial Completion. Coordinate with weather conditions to avoid unsatisfactory results.

Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration and supervision.

Sanitary facilities include temporary toilets, wash facilities and drinking water fixtures. Comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. Provide covered waste containers for used material.

Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.

Drinking Water Facilities: Provide containerized tap-dispenser bottled-water type drinking water units, including paper supply.

Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 deg F (7 to 13 deg C).

Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division-2 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations and construction free of water.

Temporary Enclosures: Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.

Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 square feet or less with plywood or similar materials.

Close openings through floor or roof decks and horizontal surfaces with load-bearing wood-framed construction.

Temporary Elevator Use: Refer to Division-14 "Elevator" Sections if applicable.

Project Identification and Temporary Signs: Prepare project identification and other signs of the size indicated; install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative treated wood or steel. Do not permit installation of unauthorized signs.

Project Identification Signs: Engage an experienced sign painter to apply graphics. Comply with details indicated.

Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.

Temporary Exterior Lighting: Install exterior yard and sign lights so that signs are visible when Work is being performed.

Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.

SECURITY AND PROTECTION FACILITIES INSTALLATION

Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer as requested by the Architect.

Temporary Fire Protection: Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations."

Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.

Store combustible materials in containers in fire-safe locations.

Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.

Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.

Enclosure Fence: When excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs and other animals from easily entering the site, except by the entrance gates.

Provide open-mesh, chain-link fencing with posts set in a compacted mixture of gravel and earth.

Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.

Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

OPERATION, TERMINATION AND REMOVAL

Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage.

Protection: Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

Termination and Removal: Unless the Architect requests that it be maintained longer, remove each temporary facility when the need has ended, or when 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 the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

Materials and facilities that constitute temporary facilities are property of the Contractor. The Owner reserves the right to take possession of Project identification signs.

Remove temporary paving that is not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that does not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances which might impair growth of plant materials or lawns. Repair or replace street paving, curbs and sidewalks at the temporary entrances, as required by the governing authority.

At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:

Replace air filters and clean inside of ductwork and housings.

Replace significantly worn parts and parts that have been subject to unusual operating conditions.

Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION 01500

SECTION 01631 - PRODUCT SUBSTITUTIONS

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Contract.

Multiple Prime Contracts: Provisions of this Section apply to the construction activities of each prime Contractor.

DEFINITIONS

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

Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions." The following are not considered substitutions:

Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.

Revisions to Contract Documents requested by the Owner or Architect.

Specified options of products and construction methods included in Contract Documents.

The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

SUBMITTALS

Substitution Request Submittal: Requests for substitution will be considered if received within 10 days prior to receipt of Bids for the Work. Requests received after that time may be accepted or rejected at the discretion of the Architect.

Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.
Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:

Product Data, including Drawings and descriptions of products, fabrication and installation procedures.

Samples, where applicable or requested.

Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors, that will become necessary to accommodate the proposed substitution.

A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.

Cost information, including a proposal of the net change, if any in the Contract Sum.

Architect's Action: Within 5 days of receipt of the request for substitution, the Architect will request additional information or documentation necessary for evaluation of the request. Within 2 days prior to receipt of Bids will notify the Contractor of acceptance of the proposed substitution. If a decision on use of a proposed substitute is not issued prior to 2 days before receipt of bids, use the product specified by name. Acceptance will be in the form of an Addendum.

PART 2 - PRODUCTS

SUBSTITUTIONS

Conditions: The Contractor's substitution request will be received and considered by the Architect when one or more of the following conditions are satisfied, as determined by the Architect; otherwise requests will be returned without action except to record noncompliance with these requirements.

Extensive revisions to Contract Documents are not required.

Proposed changes are in keeping with the general intent of Contract Documents.

The request is timely, fully documented and properly submitted.

The request is directly related to an "or equal" clause or similar language in the Contract Documents.

The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.

The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.

A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or separate Contractors, and similar considerations.

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.

The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.

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.

The Contractor's submittal and Architect'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.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01631

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies administrative and procedural requirements for project closeout, including but not limited to:

Inspection procedures.
Project record document submittal.
Operating and maintenance manual submittal.
Submittal of warranties.
Final cleaning.

SUBSTANTIAL COMPLETION

Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.

If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.

Advise Owner of pending insurance change-over requirements.

Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.

Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.

Deliver tools, spare parts, extra stock, and similar items.

Make final change-over of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of change-over in security provisions.

Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.

Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate

of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

The Architect will repeat inspection when requested and assured that the Work has been substantially completed.

Results of the completed inspection will form the basis of requirements for final acceptance.

FINAL ACCEPTANCE

Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

Submit an updated final statement, accounting for final additional changes to the Contract Sum.

Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect.

Submit consent of surety to final payment.
Submit a final liquidated damages settlement statement, if applicable.

Submit evidence of final, continuing insurance coverage complying with insurance requirements.

Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.

Upon completion of reinspection, the Architect will prepare a certificate of final acceptance, or advise the Contractor of

Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

If necessary, reinspection will be repeated.

THE COSTS OF REINSPECTIONS SHALL BE INCURRED BY THE GENERAL CONTRACTOR AT $400.00 PER REINSPECTION, PER ARCHITECT AND PER ENGINEER, AND BE PAID DIRECTLY TO THE ARCHITECT PRIOR TO REINSPECTION.

RECORD DOCUMENT SUBMITTALS

General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.

Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.

Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.

Note related Change Order numbers where applicable.

Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.

Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.

Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.

Upon completion of mark-up, submit complete set of record Product Data to the Architect for the Owner's records.

Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Architect and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.

Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work.

Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect for the Owner's records.

Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

Emergency instructions.
Spare parts list.
Copies of warranties.
Wiring diagrams.
Recommended "turn around" cycles.
Inspection procedures.
Shop Drawings and Product Data.
Fixture lamping schedule.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

CLOSEOUT PROCEDURES

Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

Maintenance manuals.
Record documents.
Spare parts and materials.
Tools.
Lubricants.
Identification systems.
Control sequences.
Hazards.
Cleaning.
Warranties and bonds.
Maintenance agreements and similar continuing commitments.

As part of instruction for operating equipment, demonstrate the following procedures:

Start-up.
Shutdown.
Emergency operations.
Noise and vibration adjustments.
Safety procedures.
Economy and efficiency adjustments.

Effective energy utilization.

FINAL CLEANING

General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".

Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

Complete the following cleaning operations before requesting inspection for Final Completion.

Remove labels that are not permanent labels.

Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.

Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION 01700

SECTION 01740 - WARRANTIES AND BONDS

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.

Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections of Divisions-2 through -16.

Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

Separate Prime Contracts: Each prime Contractor is responsible for warranties related to its own Contract.

DEFINITIONS

Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

WARRANTY REQUIREMENTS

Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

SUBMITTALS

Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.

When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within fifteen days of completion of that designated portion of the Work.

When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.

Refer to individual Sections of Divisions-2 through -16 for specific content requirements, and particular requirements for submittal of special warranties.

Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.

Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the 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 the installer.

Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS, the Project title or name, and the name of the Contractor.

When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (not applicable).

PART 3 - EXECUTION

SCHEDULE OF WARRANTIES

Schedule: Provide warranties and bonds on products and installations as specified.

END OF SECTION 01740

SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:

1. Demolition and removal of selected portions of a building.
2. Demolition and removal of selected site elements.
3. Patching and repairs.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section "Cutting and Patching" for cutting and patching procedures for selective demolition operations.
2. Division 15 Sections for cutting, patching, or relocating mechanical items.
3. Division 16 Sections for cutting, patching, or relocating electrical items.

1.3 DEFINITIONS

A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.

B. Remove and Salvage: Items indicated to be removed and salvaged remain the Owner's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to Owner's designated storage area.

C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in locations indicated.

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

1.4 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.

B. Historical items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to the Owner, which may be encountered during selective demolition, remain the Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to the Owner.

1. Cooperate with Owner's archaeologist or historical adviser.

1.5 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections, for information only, unless otherwise indicated.

B. Proposed dust-control measures.

C. Proposed noise-control measures.

D. Schedule of selective demolition activities indicating the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
2. Interruption of utility services.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Use of elevator and stairs.
5. Detailed sequence of selective demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
7. Locations of temporary partitions and means of egress.

E. Inventory of items to be removed and salvaged.

F. Inventory of items to be removed by Owner.

G. Photographs or videotape, sufficiently detailed, of existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by selective demolition operations.

H. Record drawings at Project closeout according to Division 1 Section "Contract Closeout."

1. Identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions.

I. Landfill records indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed selective demolition Work similar to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Predemolition Conference: Conduct conference at Project site to comply with preinstallation conference requirements of Division 1 Section "Project Meetings."

1.7 PROJECT CONDITIONS

A. Owner will occupy portions of the building immediately adjacent to selective demolition area. Conduct selective demolition so that Owner's operations will not be disrupted. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

B. Owner assumes no responsibility for actual condition of buildings to be selectively demolished.

1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Asbestos: It is not expected that asbestos will be encountered in the Work. If any materials suspected of containing asbestos are encountered, do not disturb the materials. Immediately notify the the Owner.

1. Asbestos will be removed by Owner before start of Work.

D. Storage or sale of removed items or materials on-site will not be permitted.

1.8 SCHEDULING

A. Arrange selective demolition schedule so as not to interfere with Owner's on-site operations.

1.9 WARRANTY

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

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

A. Use repair materials identical to existing materials.

1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
2. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.

E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.

F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

A. Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to governing authorities.

    a. Provide not less than 72 hours' notice to Owner if shutdown of service is required during changeover.

B. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving building to be selectively demolished.

1. Arrange to shut off indicated utilities with utility companies.
2. Where utility services are required to be removed, relocated, or abandoned, provide bypass connections to maintain continuity of service to other parts of the building before proceeding with selective demolition.
3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit after bypassing.

C. Utility Requirements: Refer to Division 15 and 16 Sections for shutting off, disconnecting, removing, and sealing or capping utility services. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.

B. Employ a certified, licensed exterminator to treat building and to control rodents and vermin before and during selective demolition operations.

C. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

D. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.

1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
2. Protect existing site improvements, appurtenances, and landscaping to remain.
3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
4. Provide temporary weather protection, during interval between demolition and removal of existing construction, on exterior surfaces and new construction to ensure that no water leakage or damage occurs to structure or interior areas.
5. Protect walls, ceilings, floors, and other existing finish work that are to remain and are exposed during selective demolition operations.
6. Cover and protect furniture, furnishings, and equipment that have not been removed.

E. Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.

1. Construct dustproof partitions as follows:
   a. of not less than nominal 4-inch studs, 5/8-inch gypsum wallboard with joints taped on occupied side, and 1/2-inch fire-retardant plywood on the demolition side,

      OR

   b. Zip Wall Dust Barrier System. Insure a dust-free seal top and bottom of the system. Do Not tape to the acoustical ceiling system. Clip to grid at top only. No Zipper is required (contractor's option) where there is interior access to the space(s). A min. ½" fire-resistant plywood barrier is required for security at exterior locations until the new door(s) are up and functioning.
2. Insulate partition to provide noise protection to occupied areas.
3. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
4. Protect air-handling equipment.
5. Weatherstrip openings.

F. Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of building to be selectively demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 POLLUTION CONTROLS

A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.

1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level.

C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before start of selective demolition.

3.5 SELECTIVE DEMOLITION

A. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition work above each floor or tier before disturbing supporting members on lower levels.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
8. Locate selective demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

9. Dispose of demolished items and materials promptly. On-site storage or sale of removed items is prohibited.
10. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.

B. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain, using power-driven masonry saw or hand tools; do not use power-driven impact tools.

C. Break up and remove concrete slabs on grade, unless otherwise shown to remain.

D. Remove resilient floor coverings and adhesive according to recommendations of the Resilient Floor Covering Institute's (RFCI) "Recommended Work Practices for the Removal of Resilient Floor Coverings" and Addendum.

1. Remove residual adhesive and prepare substrate for new floor coverings by one of the methods recommended by RFCI.

E. Remove no more existing roofing than can be covered in one day by new roofing. See applicable Division 7 Section for new roofing requirements.

F. Remove air-conditioning equipment without releasing refrigerants.

3.6 PATCHING AND REPAIRS

A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.

B. Patching is specified in Division 1 Section "Cutting and Patching."

3.7 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.8 CLEANING

A. Sweep the building broom clean on completion of selective demolition operation.

B. Change filters on air-handling equipment on completion of selective demolition operations.

END OF SECTION 02070

SECTION 07901 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes joint sealants for the following locations:

1. Exterior joints in vertical surfaces and nontraffic horizontal surfaces as indicated below:

    a. Perimeter joints between;
        1. Concrete Masonry Units
        2. Clay Masonry (Brick)
        3. Poured in Place Concrete
        4. Grout
        5. Hollow Metal Door Frames
        6. Aluminum Soffit System

    b. Other joints as indicated.

2. Interior joints in vertical surfaces and horizontal nontraffic surfaces as indicated below:

    a. Perimeter joints between;
        1. Concrete Masonry Units
        2. Poured in Place Concrete
        3. Hollow Metal Door Frames

    b. Other joints as indicated.

1.3 SYSTEM PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

B. Provide joint sealants for interior applications that have been produced and installed to establish and maintain airtight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.

1.4 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product data from manufacturers for each joint sealant product required.

C. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.

D. Samples for verification purposes of each type and color of joint sealant required. Install joint sealant samples in 1/2-inch wide joints formed between two 6-inch long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

E. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.

F. Compatibility and adhesion test reports from elastomeric sealant manufacturer indicating that materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed to obtain adhesion.

G. Product test reports for each type of joint sealants indicated, evidencing compliance with requirements specified.

H. Preconstruction field test reports indicating which products and joint preparation methods demonstrate acceptable adhesion to joint substrates.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

C. Preconstruction Compatibility and Adhesion Testing: Submit to joint sealant manufacturers samples of materials that will contact or affect joint sealants for compatibility and adhesion testing as indicated below:

1. Use test methods standard with manufacturer to determine if priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

    a. Perform tests under normal environmental conditions that will exist during actual installation.

2. Submit not less than 9 pieces of each type of material, including joint substrates, shims, joint sealant backings, secondary seals, and miscellaneous materials.

3. Schedule sufficient time for testing and analysis of results to prevent delay in the progress of the Work.
4. Investigate materials failing compatibility or adhesion tests and obtain joint sealant manufacturer's written recommendations for corrective measures, including use of specially formulated primers.

D. Product Testing: Provide comprehensive test data for each type of joint sealant based on tests conducted by a qualified independent testing laboratory on current product formulations within a 24-month period preceding date of Contractor's submittal of test results to Architect.

1. Test elastomeric sealants for compliance with requirements specified by reference to ASTM C 920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C 719), low-temperature flexibility, modulus of elasticity at 100 percent strain, effects of heat aging, and effects of accelerated weathering.
2. Include test results performed on joint sealants after they have cured for 1 year.

E. Preconstruction Field Testing: Prior to installation of joint sealants, field-test their adhesion to joint substrates as follows:

1. Locate test joints where indicated or, if not indicated, as directed by Architect.
2. Conduct field tests for each application indicated below:

   a. Each type of elastomeric sealant and joint substrate indicated.
   b. Each type of non-elastomeric sealant and joint substrate indicated.

3. Notify Architect one week in advance of the dates and times when mock-ups will be erected.
4. Arrange for tests to take place with joint sealant manufacturer's technical representative present.
5. Test Method: Test joint sealants by hand pull method described below:

   a. Install joint sealants in 60 inches joint lengths using same materials and methods for joint preparation and joint sealant installation required for completed Work. Allow sealants to cure fully before testing.
   b. Make knife cuts horizontally from one side of joint to the other followed by 2 vertical cuts approximately 2 inches long at side of joint and meeting horizontal cut at top of 2-inch cuts. Place a mark 1 inch from top of 2-inch piece.
   c. Use fingers to grasp 2-inch piece of sealant just above 1-inch mark; pull firmly down at a 90-degree angle or more while holding a ruler along side of sealant. Pull sealant out of joint to the distance recommended by sealant manufacturer for testing adhesive capability, but not less than that equaling specified maximum movement capability in extension; hold this position for 10 seconds.

6. Report whether or not sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate.
7. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

F. Field-Constructed Mock-Ups: Prior to installation of joint sealants, apply elastomeric sealants as follows to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution:

1. Joints in field-constructed mock-ups of assemblies specified in other Sections that are indicated to receive elastomeric joint sealants specified in this Section.

G. Pre-Installation Conference: Conduct conference at Project site to comply with requirements of the Division 1 Section covering this activity.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.
2. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer or below 40 deg F.
3. When joint substrates are wet.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.8 SEQUENCING AND SCHEDULING

A. Sequence installation of joint sealants to occur before or after waterproofing or sealing occurs, as recommended by the manufactures of both products.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and

application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors: Provide color of exposed joint sealants to comply with the following:

1. Provide selections made by Architect from manufacturer's full range of standard and special standard colors for products of type indicated.

2.2 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 920 and other requirements indicated on each Elastomeric Joint Sealant Data Sheet at end of this Section, including those requirements referencing ASTM C 920 classifications for Type, Grade, Class, and Uses.

1. Available Products: Subject to compliance with requirements, elastomeric sealants that may be incorporated in the Work include, but are not limited to, the following:

a. All Exterior Vertical Joints:

i. Sonneborn NP2

2.3 INTERIOR LATEX JOINT SEALANTS NOT INCLUDED ABOVE

A. General: Provide manufacturer's standard one-part, nonsag, mildew-resistant, paintable latex sealant of formulation indicated that is recommended for exposed applications on interior and protected exterior locations and that accommodates indicated percentage change in joint width existing at time of installation without failing either adhesively or cohesively.

B. Acrylic-Emulsion Sealant: Provide product complying with ASTM C 834 that accommodates joint movement of not more than 5 percent in both extension and compression for a total of 10 percent.

C. Available Products: Subject to compliance with requirements, latex joint sealants that may be incorporated in the Work include, but are not limited to, the following:

1. Acrylic-Emulsion Sealant:

a. "AC-20," Pecora Corp.
b. "Sonolac," Sonneborn Building Products Div., ChemRex, Inc.
c. "Tremco Acrylic Latex 834," Tremco, Inc.

2.4 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, nonstaining, nonwaxing, nonextruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

1. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, nonoutgassing in unruptured state.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate

capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.

3. Remove laitance and form release agents from concrete.
4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

   a. Do not leave gaps between ends of joint fillers.
   b. Do not stretch, twist, puncture, or tear joint fillers.
   c. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.

2. Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.

E. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

F. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration

indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

    a. Use masking tape to protect adjacent surfaces of recessed tooled joints.

3.4 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

END OF SECTION 07901

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes surface preparation and field painting of the following:

1. Exposed interior items and surfaces.
2. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

B. Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color or finish, the Architect will select from standard colors and finishes available.

1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

1. Prefinished items include the following factory-finished components:

a. Architectural woodwork and casework.
b. Acoustical wall panels.
c. Metal toilet enclosures.
d. Metal lockers.
e. Unit kitchens.
f. Elevator entrance doors and frames.
g. Elevator equipment.
h. Finished mechanical and electrical equipment.
i. Light fixtures.
j. Distribution cabinets.

2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:

a. Foundation spaces.
b. Furred areas.
c. Ceiling plenums.

d. Utility tunnels.
e. Pipe spaces.
f. Duct shafts.
g. Elevator shafts.

3. Finished metal surfaces include the following:

a. Anodized aluminum.
b. Stainless steel.
c. Chromium plate.
d. Copper.
e. Bronze and brass.

4. Operating parts include moving parts of operating equipment and the following:

a. Valve and damper operators.
b. Linkages.
c. Sensing devices.
d. Motor and fan shafts.

5. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.3 DEFINITIONS

A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
2. Eggshell refers to low-sheen finish with a gloss range between 5 and 20 when measured at a 60-degree meter.
3. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.
4. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.
5. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

1.4 SUBMITTALS

A. Product Data: For each paint system specified. Include block fillers and primers.

1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
2. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.

B. Samples for Verification: Of each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.

1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
2. Provide a list of materials and applications for each coat of each sample. Label each sample for location and application.
3. Submit Samples on the following substrates for the Architect's review of color and texture only:

a. Concrete: Provide two 4-inch- square samples for each color and finish.
b. Concrete Masonry: Provide two 4-by-8-inch samples of masonry, with mortar joint in the center, for each finish and color.
c. Painted Wood: Provide two 12-inch- square samples of each color and material on hardboard.
d. Stained or Natural Wood: Provide two 4-by-8-inch samples of natural- or stained-wood finish on actual wood surfaces.
e. Ferrous Metal: Provide two 4-inch- square samples of flat metal and two 8-inch- long samples of solid metal for each color and finish.

C. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

B. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.7 PROJECT CONDITIONS

A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 deg F.

B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 deg F.

C. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

1.8 EXTRA MATERIALS

A. Furnish extra paint materials from the same production run as the materials applied in the quantities described below. Package paint materials in unopened, factory-sealed containers for storage and identify with labels describing contents. Deliver extra materials to the Owner.

1. Quantity: Furnish the Owner with an additional 5 percent, but not less than 1 gal. or 1 case, as appropriate, of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products in the paint schedules.

C. Manufacturers Names: The following manufacturers are referred to in the paint schedules by use of shortened versions of their names, which are shown in parentheses:
1. Benjamin Moore & Co. (Moore) / Coronado (VCS preferred standard). Local supplier is Southern Paint & Supply Co., 239 S Segrave Street, Daytona Beach, FL 32114. Contact Joe Tuttolomondo, President : (386) 253-8107
2. (Devoe & Raynolds Co. (Devoe).
2. Fuller-O'Brien Paints (Fuller).
3. Glidden Co. (The) (Glidden).
4. PPG Industries, Inc. (PPG).
6. Pratt & Lambert, Inc. (P & L).
7. Sherwin-Williams Co. (S-W).
8. MAB

2.2 PAINT MATERIALS, GENERAL

A. Material Compatibility: Provide block fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

C. Colors: Provide custom colors of the finished paint systems to match the Architect's samples.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.

1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.

3.2 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning.

1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and reprime.
2. Cementitious Materials: Prepare concrete, concrete masonry block, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.

    a. Use abrasive blast-cleaning methods if recommended by paint manufacturer.
    b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's written instructions.
    c. Clean concrete floors to be painted with a 5 percent solution of muriatic acid or other etching cleaner. Flush the floor with clean water to remove acid, neutralize with ammonia, rinse, allow to dry, and vacuum before painting.

3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.

    a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
    b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling.
    c. When transparent finish is required, backprime with spar varnish.
    d. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on backside.
    e. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.

4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.

    a. Blast steel surfaces clean as recommended by paint system manufacturer and according to requirements of SSPC-SP 10.
    b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
    c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.

5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

D. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
3. Use only thinners approved by paint manufacturer and only within recommended limits.

E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Paint colors, surface treatments, and finishes are indicated in the schedules.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
3. Provide finish coats that are compatible with primers used.
4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, covers for finned-tube radiation, grilles, and similar components are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.
5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before the final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
8. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
9. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.
10. Sand lightly between each succeeding enamel or varnish coat.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a

smooth, even surface according to manufacturer's written instructions, sand between applications.

2. Omit primer on metal surfaces that have been shop primed and touchup painted.
3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.
2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.

E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and in occupied spaces.

G. Electrical items to be painted include, but are not limited to, the following:

1. Conduit. See electrical specifications.

H. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.

I. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.

J. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

K. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.

1. Provide satin finish for final coats.

L. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling, such as laps, irregularity in texture, skid marks, or other surface imperfections.

M. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 FIELD QUALITY CONTROL

A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:

1. The Owner will engage the services of an independent testing agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
2. The testing agency will perform appropriate tests for the following characteristics as required by the Owner:

    a. Quantitative material analysis.
    b. Abrasion resistance.
    c. Apparent reflectivity.
    d. Flexibility.
    e. Washability.
    f. Absorption.
    g. Accelerated weathering.
    h. Dry opacity.
    i. Accelerated yellowness.
    j. Recoating.
    k. Skinning.
    l. Color retention.
    m. Alkali and mildew resistance.

3. The Owner may direct the Contractor to stop painting if test results show material being used does not comply with specified requirements. The Contractor shall remove noncomplying paint from the site, pay for testing, and repaint surfaces previously coated with the rejected paint. If necessary, the Contractor may be required to remove rejected paint from previously painted surfaces if, on repainting with specified paint, the 2 coatings are incompatible.

3.5 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

3.6 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.

1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.7 INTERIOR PAINT SCHEDULE

A. Existing Painted Concrete Masonry Units: Provide the following finish system over existing interior painted concrete masonry block units:

1. Semi-Gloss, Pre-Catalyzed Waterborne Epoxy Finish: 2 finish coats over existing paint.

a. Clean all Surfaces to be painted with commercial Oil-Degreaser per manufacturer's published instructions:
1) Moore: HP6000 Oil & Grease Emuslfier
2) Approved Equal

b. First and Second Coats: Eggshell, water-based, interior epoxy applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.5 - 1.9 mils.
1) Moore: HP3410 Pre-Catalyzed Waterborne Epoxy, Semi-Gloss
2) Approved Equal

B. Ferrous Metal: Provide the following finish systems over ferrous metal:

1. Semigloss, Alkyd-Enamel Finish: One finish coat over an enamel undercoater and a primer.

a. Primer: Quick-drying, rust-inhibitive, alkyd-based or epoxy-metal primer, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.5 mils.
1) Devoe: 13101 Mirrolac Rust Penetrating Metal Primer.
2) Fuller: 621-04 Blox-Rust Alkyd Metal Primer.
3) Glidden: 5207 Glid-Guard Tank & Structural Primer, White.
4) Moore: IronClad Retardo Rust-Inhibitive Paint #163.
5) PPG: 6-208 Speedhide Interior/Exterior Rust Inhibitive Steel Primer.
6) P & L: S 4551 Tech-Gard High Performance Rust Inhibitor Primer.
7) S-W: Kem Kromik Metal Primer B50N2/B50W1.

b. Undercoat: Alkyd, interior enamel undercoat or semigloss, interior, alkyd-enamel finish coat, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.

1)	Devoe:	26XX Velour Interior Alkyd Semi-Gloss Enamel.
2)	Fuller:	220-07 Interior Alkyd Enamel Undercoat.
3)	Glidden:	UH 8400 Ultra Traditional Alkyd Semi-Gloss Enamel.
4)	Moore:	Moore's Alkyd Enamel Underbody #217.
5)	PPG:	6-6 Speedhide Interior Quick-Drying Enamel Undercoater.
6)	P & L:	S/D 1011 Suprime "11" Interior Alkyd Wood Primer.
7)	S-W:	ProMar 200 Interior Alkyd Semi-Gloss Enamel B34W200.

c. Finish Coat: Odorless, semigloss, alkyd, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.4 mils.

1)	Devoe:	26XX Velour Interior Alkyd Semi-Gloss Enamel.
2)	Fuller:	110-XX Fullerglo Alkyd Semi-Gloss Enamel.
3)	Glidden:	UH 8400 Ultra Traditional Alkyd Semi-Gloss Enamel.
4)	Moore:	Satin Impervo #235.
5)	PPG:	27 Line Wallhide Low Odor Interior Enamel Wall and Trim Semi-Gloss Oil.
6)	P & L:	S/D 5700 Cellu-Tone Alkyd Satin Enamel.
7)	S-W:	Classic 99 Interior/Exterior Semi-Gloss Alkyd Enamel A-40 Series.

C. Zinc-Coated Metal: Provide the following finish systems over zinc-coated metal:

1. Semigloss, Alkyd-Enamel Finish: One finish coat over an undercoat and a primer.

a. Primer: Galvanized metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.

1)	Devoe:	13201 Mirrolac Galvanized Metal Primer.
2)	Fuller:	621-05 Blox-Rust Latex Metal Primer.
3)	Glidden:	5207 Glid-Guard Tank & Structural Primer, White.
4)	Moore:	IronClad Galvanized Metal Latex Primer #155.
5)	PPG:	90-709 Pitt-Tech One Pack Interior/Exterior Primer/Finish DTM Industrial Enamel.
6)	P & L:	Z/F 1003 Suprime "3" Interior/Exterior Latex Metal Primer.
7)	S-W:	Galvite Paint B50W3.

b. Undercoat: Alkyd, interior enamel undercoat or semigloss, interior, alkyd-enamel finish coat, as recommended by the manufacturer for this

substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.

1)	Devoe:	26XX Velour Interior Alkyd Semi-Gloss Enamel.
2)	Fuller:	220-07 Interior Alkyd Enamel Undercoat.
3)	Glidden:	UH 8400 Series Spred Ultra Traditional Alkyd Semi-Gloss Enamel.
4)	Moore:	Moore's Alkyd Enamel Underbody #217.
5)	PPG:	6-6 Speedhide Interior Quick-Drying Enamel Undercoater.
6)	P & L:	S/D 1011 Suprime "11" Interior Alkyd Wood Primer.
7)	S-W:	ProMar 200 Interior Alkyd Semi-Gloss Enamel B34W200.

c. Finish Coat: Odorless, semigloss, alkyd, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.4 mils.

1)	Devoe:	26XX Velour Interior Alkyd Semi-Gloss Enamel.
2)	Fuller:	110-XX Fullerglo Alkyd Semi-Gloss Enamel.
3)	Glidden:	UH 8400 Ultra Traditional Alkyd Semi-Gloss Enamel.
4)	Moore:	Satin Impervo #235.
5)	PPG:	27 Line Wallhide Low Odor Interior Enamel Wall and Trim Semi-Gloss Oil.
6)	P & L:	S/D 5700 Cellu-Tone Alkyd Satin Enamel.
7)	S-W:	Classic 99 Interior Alkyd Semi-Gloss Enamel A-40 Series.

END OF SECTION 09900

SECTION 126612 – TELESCOPING BLEACHERS

PART 1 - GENERAL

RELATED DOCUMENTS

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

1.1 WORK INCLUDED

A. Manufacture, deliver and install Telescopic Seating Systems in accordance with applicable codes, the following specifications, and approved drawings.

1.2 RELATED WORK BY OTHERS

A. Adequate floor levelness and strength for operation of telescopic seating.

B. Adequate wall strength for attachment and operation of wall attached telescopic seating.

C. Electrical wiring within the building as required for power operated telescopic seating.

1.3 SYSTEM DESCRIPTION

A. Telescopic seating system shall be multiple tiered seating rows comprised of seat and deck components, risers, and supportive understructure.

B. Telescopic seating shall be operable on the telescopic principle, stacking vertically in minimum floor area when not in use.

C. The first moving row, on manual sections, shall be secured with release lever. All other rows shall be mechanically locked, operable only upon unlocking and cycling of first row. Power sections shall be secured with mechanical locks as well as the power system, operable upon activating the pendant control.

1.4 QUALITY ASSURANCE

A. DESIGN LOAD CRITERIA (STRUCTURAL): International Building Code Standard: Comply with requirements of IBC / ICC 300, Chapter 4 "Standard for Bleachers, Folding and Telescopic Seating and Grandstands Assembly Seating," except where other requirements are indicated by the architect/owner.

B. Partial Loading Requirements: Telescopic seating governed by IBC 2018, ICC-300 2017, NFPA 102 2016 or NFPA 5000 2018 shall all comply with ASCE 2016, Section 4.3.3 Partial Loading.

C. Manufacturer: Company specializing in telescopic seating with a minimum of 25 years' experience in manufacturing telescopic seating.

D. Engineer Qualifications: Manufacturer to employ a registered, licensed Professional Engineer, registered in the state of Florida, to certify that the equipment to be supplied meets or exceeds the design criteria of this specification.

E. Installation: Shall be handled directly by the manufacturer or by a factory certified installation subcontractor.

F. Product Liability: Certification of insurance coverage of not less than $5,000,000.

G. Welding Processes: To be performed by certified professional welding operators in accordance with American Welding Society – Certified Welding Fabricator, (AWS-CWF), D1,1 "Structural Welding Code-Steel."

H. Product Improvements: Equipment provided shall incorporate manufacturer's design improvements and materials current at time of shipment, provided that such improvements and materials are consistent with the intent of these specifications.

1.5 SUBMITTALS

A. Project-specific Manufacturer's descriptive literature and specifications.
B. List of deviations from these specifications, if any.
C. Certification of Insurance.
D. Shop Drawings showing all equipment to be furnished with details of accessories to be supplied, including necessary electrical service to be provided by others. All electrical submittals must include U.L. listing number.
E. Samples of material and color finish as requested by Architect.
F. Warranty, operation and maintenance instructions to the owner upon completion.

1.6 DESIGN CRITERIA

A. Telescopic seating shall be designed to support, in addition to its own weight, and the weight of added accessories, a uniformly distributed live load of not less than 100 lbs. per sq. ft. (4.8 kN per sq. m.) of gross horizontal projection. Seat boards and footrest shall be designed for a live load of not less than 120 lbs. per linear foot (1.751 kN per linear m).

B. Sway force applied to seats shall be 24 lbs. per linear ft. (350 N per linear m.) parallel to the seats and 10 lbs. per linear ft. (146 N per linear m.) perpendicular to the seats. Sway forces shall not be considered simultaneously applied.

C. Railings, posts and sockets designed to withstand the following forces applied separately.

D. Handrails shall be designed and constructed for:
1. A concentrated load of 200 lbs. (890 N) applied at any point and in any direction.
2. A uniform load of 50 lbs. per ft. (730 N/m) applied in any direction.
3. The concentrated and uniform loading conditions shall not be required to be applied simultaneously.

E. Guards shall be designed and constructed for:
1. A concentrated load of 200 lbs. (890 N/m) applied at any point and in any direction along the top railing member and; a uniform load of 50 lbs. per ft. (730 N/m) applied horizontally at the required guardrail height and simultaneous uniform load of 100 lbs. per ft. (1460 N/m) applied vertically downward at the top of the guardrail.

2. The concentrated and uniform loading conditions shall not be required to be applied simultaneously.
3. American Institute of Steel Construction (AISC), American Iron and Steel Institute (AISI) and Aluminum Association (AA) design criteria shall be the basis for calculation of member sizes and connections.
4. Wood members shall be designed in accordance with National Forest Products Association, (NFOPA), and National Design Specification for Wood Construction.

1.7 WARRANTY

A. The manufacturer shall warrant all work performed under these specifications to be free of defects for a period of one year.

B. All understructure components shall be warranted for a period of ten years.

C. Any materials found to be defective within this period will be replaced at no cost to the owner. This warranty shall not include replacements required by Acts of God, war, vandalism, flood, fire, calamity or deliberate abuse or misuse of the equipment.

3.1 ACCEPTABLE MANUFACTURERS

A. BASIS OF DESIGN

1. Irwin Seating Company's *VersaTract Telescopic Seating System*, w/ indicated and specified features and accessories.

B. Acceptable Manufacturers:

1. The Kodiak Seating Company
2. Hussey Seating Company

3.2 MATERIALS

A. Seating Area: See Plans. Electrically Operated.

B. Dimensions:
1. Overall height: See Plans.
2. Open depth: See Plans.
3. Closed depth: See Plans.
4. Row Spacing: 22 Inches
5. Rise per row: 10 Inches

3.3 FABRICATION

A. Understructure System:

1. Steel supports and rolling frames shall be constructed from formed steel of the size and shape necessary to support the design loads. All support bracing shall begin at Row 2 and be of diagonal or "knee" type for rigidity. Diagonal bracing to be minimum 1 1/2" x 1 1/2" 14-gauge square tubing. Bracing fabricated from open-sided channel, angle iron or flat strap "X" type bracing is unacceptable.

2. Wheels shall not be less than 5" diameter x 1 3/8" non-marring soft rubber face to protect wood or synthetic floor surfaces. Each operating row shall have a minimum of 6 wheels.

3. Each fully skirted wheel channel shall be formed 12-gauge steel and continuously in contact with adjacent channels by means of an Integral Alignment System (IAS) and include nylon glides to eliminate any metal to metal contact. The IAS maintains proper alignment between adjacent wheel channels for smooth and consistent operation while eliminating the potential for accidental row separation. Wheel channel alignment systems with metal to metal contact requiring periodic lubrication or that utilizes a guide rod system that can be bent or damaged will not be acceptable.

4. Each cantilever arm shall be triple-formed 10-gauge steel, securely welded to the post assembly and include a nylon cantilever pad to ensure smooth operation. The cantilever pad shall also provide a firm base when in the occupied position and provide a solid feel when walked on.

5. Vertical columns shall be high tensile steel structural tube to meet design criteria. Minimum column size to be 2” x 3” 14-gauge structural tube, welded to a 2’ wide wheel channel using 360 degrees of weldment.

6. Deck support members shall be double formed 14-gauge steel and connect the front nosing and rear riser members. Each deck support shall include a unique dual-purpose roller that provides smooth support during operation. The deck support roller shall also include a 3/4” wide shoulder that’s encapsulated by the deck support on the row above in order to maintain proper upper alignment while delivering consistent, repeatable operation.

B. Seat System:

1. Infinity Seat: Supply plastic modular 18” individual seats in 10” deep models. Seating to be scuff resistant injection molded high density polyethylene plastic.

a. Seat modules supplied shall be of a high aesthetic design using multiple textures, style lines and a waterfall front. The rear of the seat shall be slightly curved to eliminate the straight line appearance and include a moderate seat contour and texture to enhance spectator comfort.

b. Seating design shall be molded to achieve a finished end appearance without the use of end caps. The rear of the seat shall include a smooth wall allowing for the deck to be easily swept clean without obstruction.

c. Seat heights shall be maintained at a minimum of 16 3/4". Lower seat heights which detour from spectator comfort will not be accepted.

d. Foot space shall be maximized for spectator comfort and provide a minimum of 22” when measured with a 10” module and 21” with a 12” module.

e. Each seat to be designed with the capability of using seat numbers and row letters at the aisle locations. Seat numbers to be stylishly designed using a radius corner to enhance the aesthetic value of the seat. Seat numbers and row letters shall be recessed into the seat to protect against any vandalism.

f. Select seating colors from manufacturer’s 15 standard colors. Custom colors available as an option.

g. Securely fasten each seat to the nose beam using a 10-gauge formed steel bracket and locking hardware. Adjacent seating shall be interlocked together along the full perimeter eliminating any fore or aft movement or the potential of any pinching hazard.

h. Seat modules shall be designed to support a uniform load of 600 lbs per seat and a concentrated load of 150 lbs over 4 square inches.

C. Deck System:

1. Clear Coat decking shall be finished using a two-pass UV topcoat process for maximum appearance and durability. Each of the two finishing cycles shall consist of a pass through the clear polyurethane roller coating, followed by a UV activation process permanently setting the finish.

2. Each plywood panel shall be constructed from AC grade 5-ply western fir plywood with a high quality Radiata Pine face ply in strict compliance with U.S. Product Standard PS 195.

3. Plywood shall be supported along the front and back edge for maximum rigidity and designed in a manner that allows 3 plies to run front to back for increased deck strength.

4. Each plywood panel shall be connected using a tongue and groove splice leaving the deck clean and free of any tripping or cleaning obstructions.

5. Plywood using a single coat of finish or applied without the UV setting process that will show wear faster is unacceptable.

6. Decking shall be secured in place by the encapsulation of the rear riser and mechanical fasteners along the front edge.

7. Finish thickness to be 5/8”.

D. Nosing: Nosing shall be one piece, formed, 14-gauge steel with a minimum G-60 pre-galvanized finish.

E. Rear Risers: Rear riser shall be one piece, formed, 14-gauge steel with a minimum G-60 pre-galvanized finish.

F. Finish: For rust resistance in standard conditions all painted surfaces shall be finished in textured Epoxy Powder Coated Semi-Gloss Black.

2.4 ACCESSORIES

A. Aisles shall be footrest level 40 inches wide and 52” wide to provide three aisles. Aisles at the footrest level shall include non-slip treads on the top front edge.

B. Intermediate aisle steps shall be provided. Steps are permanently attached closed design. Steps shall be constructed from 14 ga. steel, finished in a Black powder coated epoxy, and designed to eliminate any possible toe catch between the top of the intermediate step and the bottom of the nose beam per ADA or other applicable codes. Front step shall be removable and interlock to the front row eliminating any possibility of accidental disengagement, and store on the front row when not in use.

C. Aisle handrails.

1. Smart Rail aisle handrails shall be provided for 22” to 26” row spacing.

2. Aisle railings shall quickly and easily rotate 90 degrees to the locked position and store parallel to the front of the aisle.
3. Railings that require removal from the pocket or the use of tools for storage will not be acceptable.
4. Aisle railings shall be an individual rail design, located on every other row starting at row two (2).
5. Railing to be constructed of 1 1/2” 11 ga. round steel tubing, finished in a textured powder coated epoxy.
6. For safety, railings designed without a full return of the handrail will not be acceptable.

D. Wheel Chair Seating Areas.
1. Permanent wheel chair spaces shall be provided at the section joint location or section length as shown on plans. Permanent notches to have a Panelam closure panel to eliminate any open areas under the system. Closure panels to support row two eliminating damage to the understructure or the need for front railings.

E. End rails.
1. End rails of the self-storing type, finished with textured epoxy powder-coated black enamel, shall be provided at the open ends of the group.
2. End rails shall start at row three and be constructed from 1” square tubing to meet all national building codes.
3. Railings with flexible uprights that can be expanded beyond the 4” sphere are not acceptable.

E. Vinyl End Curtains: shall be provided to limit unauthorized access to the underside of the telescopic system. Curtain to be one piece design shaped to follow the angle of the telescopic unit in the open position and constructed of a sturdy vinyl material with sewn-in grommets for attachment. Color to be selected from manufacturer’s standard selection.

F. Scorer’s Table.

2.5 PROPULSION SYSTEM

A. FRICTION POWER: Integra Drive System (IDS) shall be furnished on each seating group to open and close the telescopic units. Each individual section shall include 2 IDS friction drive systems integrated into the first moving row of understructure to achieve smooth and efficient operation. Operation of the seating shall be accomplished with the use of a walk along pendant control.

1. Each IDS power system shall include large 6 1/2" diameter friction rollers to develop tractive force adequate to open and close the system. Each roller to include non-marring 1/2" thick rubber covering.

2. Electrical motors for each section shall be heavy-duty and high efficiency gear reduction motors. The shaft diameter for the gear motor and rollers shall be a minimum of 1” and be connected by a 1” schedule 40 drive shaft.

3. All roller chain and sprockets used throughout the drive system shall be a minimum of #40 in size. Each drive unit shall be designed to include a safety shroud around the chain and sprocket for overall safety.

4. The power units shall develop tractive forces adequate to operate the seating units under normal conditions but inadequate to operate should significant obstacles be encountered.

B. Manufacturer shall provide all wiring from power source within bleacher seating, including pendant control.

C. Removable pendant control shall be handheld with forward and reverse button, plugging into a single receptacle.

D. Electrical contractor shall provide a 60 HZ power source (as specified below) behind each group of seating.

E. Amperage to be as specified by seating manufacturer depending on the number of power units required.

F. For wall-attached installations, power source to terminate in a surface mounted junction box above floor.

G. Electrical contractor shall perform the connections to the seating equipment at the junction box.

H. All electrical parts and wiring shall be installed in complete accord with the National Electric Code. U.L. Listing FHJU.E479554.

I. Supply power system with 208/230V, 5 wire 3-phase system.

3.1 REVIEWS AND APPROVALS

A. Shop drawings shall be approved and job site field measurements taken prior to installation and telescopic gym seating shall be installed in conformance therewith.

3.2 INSTALLATION

A. The installation of the telescopic gym seating will be handled directly by the manufacturer or by a factory authorized installation subcontractor qualified to perform the installation function.

3.3 PROTECTION

A. The manufacturer’s representative shall demonstrate, in-person, and transmit instructions in both operation and maintenance, to the owner.

B. Maintenance and operation of the telescopic gym seating shall be the responsibility of the owner or his duly authorized representative, and shall include the following:

1. During operation of the telescopic gym seating, the opening and closing shall be supervised by responsible personnel who will assure that the operation is in accordance with the manufacturer's instructions.
2. Only attachments specifically approved by the manufacturer for the specific installation shall be attached to the telescopic gym seating.

END OF SECTION 126612

SECTION 26 0100
OPERATION AND MAINTENANCE MANUALS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. O & M Manuals contain copies of all warranties, operation and maintenance instructions, and other pertinent information relative to the project that is used throughout the life of the facility. This section contains additional requirements for the preparation of Electrical (Power and Lighting) and Systems Operation and Maintenance Manuals.

1.3 OPERATION AND MAINTENANCE MANUALS

A. O& M Manuals shall consist of a minimum of one hard cover view type 3-ring binder sized to hold 8 1/2-inch x 11 inch sheets for Electrical and Systems. Refer to Division 01, General Requirements for additional requirements.

1. Each binder is to be adequately sized to comfortably hold required submittals. Minimum spline size to be 1 inch, maximum spline size to be 3 inch. Provide additional binders if 3 inch size is not sufficient to properly hold submittals.

2. Binder cover and spline to have outer clear vinyl pockets. Provide correct designation of project in each pocket; see Binder Examples for O & M Manuals at the end of this section. Description sheet is to be white with black letters, minimum of 11 inches high and full width of pocket. Description is to describe project and match project drawing/project manual description. Description to include submittal type, i.e. Operation and Maintenance for Electrical (Power and Lighting).

B. O & M Data:

1. Manufacturers' operation and maintenance data is required for all items as called for in the specifications. O & M Manuals shall include manufacturer's name, model number(s), characteristics, manufacturer's agent, service agent, supplier, where and/or what item(s) are used for and description (i.e. surge suppression - switchboard MDPA).

2. Include troubleshooting instructions, list of special tools required, theory of operation, manufacturer's care and cleaning, preventative maintenance instructions, wiring diagrams, and point-to-point schematics.

C. O & M Manuals to include but are not limited to:

1. Completed forms and information per Division 01, General Requirements, and this section of the specifications. Reinforced separation sheets tabbed with the appropriate specification reference number and typed index for each section in the Systems Schedule.
    a) Table of Contents
    b) Project Information Sheet
    c) Reinforced Separation Sheets tabbed with the appropriate specification reference number and typed index for each section in the Systems Schedule
    d) Check Out Memo

e) Progress and Record Drawing Certification
f) Spare Parts Certification Memo

2. Shop Drawings: Shop drawings shall be a copy of the final and accepted shop drawing submitted as required in Section Submittals. These shall be inserted in binder in proper order.

3. Product Data: Product data and/or Catalog sheets shall be a copy of the final and accepted submittal submitted as required in Section Submittals. These shall be inserted in binder in proper order.

4. Warranties/Guarantees: Provide copy of warranties/guarantees. Original warranties/guaranties are to be incorporated into separate project warranty book with warranties/guarantees provided for other sections and divisions of the specifications and submitted for Architectural/Owner acceptance.

5. Copies of electrical panel schedules and electrical panel directories included with the corresponding specification section.

6. For Sections 26
   a) Product data and/or catalog sheets on all equipment applicable to this project.
   b) Equipment supplier list for each section's equipment.
   c) Ground fault wiring devices; in addition to above provide:
      1. Wiring diagram.

7. Sections 26
   a) Product data and/or catalog sheets on equipment applicable to this project.
   b) Equipment supplier list for each sections equipment.
   c) Panels, distribution panelboards, switchboards; in addition to above provide:
      1. Copy of directory.

1.4 SUBMITTALS

A. Initial submittals shall be comprised of electronically created and annotated PDF files. Once the PDFs have been approved by Engineer print hard copies for Owner.

B. The Contractor shall review the manuals before submitting to the A/E. No request for payment will be considered until the brochure has been reviewed and submitted for acceptance.

C. Print a minimum of three (3) sets of O & M Manuals, for Owner.

D. Provide additional copies if additional copies are required in other Divisions and/or sections of these specifications.

1.5 DELAYS

A. Contractor is responsible for delays in job project accruing directly or indirectly from late submissions or resubmissions of shop drawings, or product data.

1.6 RESUBMITTALS

A. The A/E shall be reimbursed cost to review re-submittals subsequent to the second submittal.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

PROJECT INFORMATION SHEET

Project Name:

Project Number:

Substantial Completion Date:

Certificate of final Completion Date:

	Name & Address	Phone/Fax	Contact
Authorized Construction Representative			
Architect			
Electrical Engineer	TAGS Engineering 1621 Katie Cv. Sanford, FL 32771	P: 407/463-9568	

Brief Description of Project Scope:

CHECK OUT MEMO

Check Out Memo shall be completed and a copy provided to the Owner at the Owner's Performance Verification and Demonstration meeting. A copy shall also be included in the specification section of each O & M Manual for the equipment checked.

Project Name_____

Type of Equipment Checked_____

Equipment Number_____

Manufacturer of Equipment_____

Signature below by the manufacturer's authorized representative signifies that the equipment has been satisfactorily tested and checked out on the job by the manufacturer.

- The attached Test and Data and Performance Verification information was used to evaluate the equipment installation and operation.
- The equipment is properly installed, has been tested by the manufacturer's authorized representative, and is operating satisfactorily in accordance with all requirements, except for items noted below.*
- Written operating and maintenance information has been presented and reviewed in detail with the Contractor.
- Sufficient copies of all applicable operating and maintenance information, parts lists, lubrication checklists, and warranties have been furnished to the Contractor for insertion in the Operation and Maintenance Manuals.

_____
MANUFACTURER'S REPRESENTATIVE – PRINT NAME

_____
ADDRESS

_____
TELEPHONE, FAX, E-MAIL

_____
MANUFACTURER'S REPRESENTATIVE – SIGNATURE AND TITLE

_____
DATE CHECKED

WITNESSED BY:

_____
CONTRACTOR'S REPRESENTATIVE – SIGNATURE AND TITLE

***EXCEPTIONS NOTED AT TIME OF CHECK-OUT (USE ADDITIONAL PAGE IF NECESSARY)**

PROGRESS AND RECORD DRAWING CERTIFICATION

NAME OF PROJECT:_____

DIVISION NUMBER AND NAME:_____

This is to certify that the attached marked-up design prints were marked as the items were installed at the site during construction, and that these prints represent as accurate "As-Builts" record of the work as actually installed. One copy will be turned over to the Owner at the instruction in Operation Conference. The duplicate copy is for the Engineer's files.

_____
General Contractor

_____
By: Authorized Signature And Title

_____
Date

_____
Subcontractor

_____
By: Authorized Signature And Title

_____
Date

SPARE PARTS / MAINTENANCE STOCK CERTIFICATION

This form verifies that the parts/stock listed below has been delivered to and received by Maintenance Department. Original shall be included in the Closeout Documentation Manual. Copies shall also be included in the O & M Manual.

Project Name:_____

Type/Name of Spare Parts/Attic Stock:_____

_____

Specification Reference:_____

Quantity of Spare Parts/Attic Stock:_____

_____

_____

Signature below by the Contractor and Subcontractor signifies that the spare parts/maintenance stock, required by the Contract Documents, have been delivered to the Owner.

_____
Contractor/CM

_____ Date:_____
Authorized Signature, Title

_____
Subcontractor

_____ Date:_____
Authorized Signature, Title

Signature by the Owner acknowledges receipt of the same spare parts/maintenance stock.

_____
Department

_____ Date:_____
Authorized Signature, Title

BINDER EXAMPLES FOR SUBMITTALS
Insert in Vinyl Pockets (Front & Spline) 3-Ring Binder

MANUAL COVER (face)

Southwestern Middle School, Replace Gymnasium Bleachers
ADDRESS

MPE No. 2025-XXX
VCS 2648249

ELECTRICAL
OPERATION AND MAINTENANCE MANUAL

DATE
(substantial completion date)

MANUAL COVER (Spine)

Southwestern Middle School, Replace Gymnasium Bleachers

MPE No. 2025-XXX
VCS 2648249

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OPERATION AND MAINTENANCE MANUAL

DATE

END OF SECTION

SECTION 26 0103

MINOR ELECTRICAL DEMOLITION FOR REMODELING

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. Provide and install all equipment, labor, material, accessories, and mounting hardware for minor electrical demolition for remodeling.

1.3 REFERENCES

A. NFPA 70 National Electrical Code

B. Underwriters Laboratories

PART 2 – PRODUCTS

2.1.1 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work as specified in individual sections.

B. Provide all materials necessary for work.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify field measurements and circuiting arrangements are as shown on drawings.

B. Verify that abandoned wiring and equipment serve only abandoned facilities.

C. Demolition drawings are based on field observation and existing record documents. Report discrepancies to Architect/Engineer before disturbing existing installation.

D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

A. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

B. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from Owner, Architect/Engineer at least 24 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Remove, relocate, and extend existing installations to accommodate new construction.

B. Remove abandoned wiring to source of supply.

C. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.

D. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not removed.

E. Disconnect and remove abandoned panelboards and distribution equipment.

F. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.

G. Repair adjacent construction and finishes damaged during demolition and extension work.

H. Seal openings in walls, floors, etc. and fire stop in accordance with the accepted UL detail to maintain integrity of assembly.

I. Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate and as required to comply with the requirements of the NEC.

J. Extend existing installations using materials and methods compatible with existing electrical installations. Extension must meet or exceed the materials/methods specified in the contract documents.

3.4 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused, including but not limited to:
   1. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Replace any missing cover screws with new cover screws obtained from existing panel manufacturer. Provide typed circuit directory showing revised circuiting arrangement.

END OF SECTION

SECTION 26 0105

INVESTIGATION OF EXISTING ELECTRICAL SYSTEMS

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 testing and documentation of existing electrical systems.

B. Test the essential features of the following existing electrical systems:
   1. Outlets: Convenience.

C. Each system shall be tested once only, and after completion of testing, results given to the Owner, Engineer and/or Owner's Representative. Point out any non-operational function noticed during testing.

D. Document the existing conditions and operation of the existing electrical systems prior to any work.

E. Contractor is responsible for all non-working systems and their components unless non-working status is verified prior to work on system.

1.3 REFERENCES

A. IEEE Recommended Practices

1.4 DESCRIPTION

1.5 TIME

A. The testing shall be held at a date to be agreed upon in writing by the Owner or his representative.

1.6 ATTENDING PARTIES

A. The testing shall be held in the presence of the Owner, or his Representative and Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 PERFORMANCE VERIFICATION

A. Test the operation of each of the following existing devices and associated systems:
   1. Wiring Devices (Outlets) In Areas of Remodel and/or Renovation:
      a) Test receptacles for continuity, open grounds, open neutrals etc. Use circuit testers and record location and results of tested device.

B. The Electrical Contractor shall investigate all existing systems as called out in this performance verification prior to the beginning of any work which could affect these systems.

C. Each system shall be retested after completion of remodel and/or renovation to ensure proper operation is maintained. Demonstrate operation per Section 26 05 06 Demonstration of Completed Electrical Systems.

3.2 INVESTIGATION/TESTING FORMS

A. Submit Existing Facilities Investigation Form (included at the end of this Section) and advise Owner/Engineer of all deficiencies in system(s) prior to work. All systems will be assumed to be fully operational if Form is not received by Engineer prior to work on system.

B. Submit five copies of Existing Facilities Investigation Form for each device tested, signed by the Contractor, Subcontractor and Owner and submit each test result to the Owner's Authorized Representative.

Attachments:
Existing Facilities Investigation

END OF SECTION

EXISTING FACILITIES INVESTIGATION

PROJECT:_____

The existing systems on the above project have been investigated and checked to determine the existing condition of all existing electrical systems within the area(s) affected by the scope of work of this project. The investigation consisted of testing all electrical systems/devices as required by Section 26 01 05 Investigation of Existing Electrical Systems.

All equipment was found to be operational except as noted herein (list below):

_____
PRIME CONTRACTOR

_____
AUTHORIZED SIGNATURE AND TITLE

DATE_____

_____
OWNER'S AUTHORIZED REPRESENTATIVE

_____
AUTHORIZED SIGNATURE AND TITLE

DATE_____

Note To Contractor: Upon completion of investigation and one week prior to the commencement of work, submit five copies of the completed Existing Facilities Investigation Form to the Owner's Authorized Representative, signed and dated by the Contractor. The Owner’s Authorized Representative’s signature and date is required to verify receipt of Form. Retain copy(ies) and submit copy of Form in each Operation and Maintenance Manual. Contractor shall submit quantities of Forms as required to present required information.

SECTION 26 0500

COMMON WORK RESULTS FOR ELECTRICAL

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 Basic Electrical Requirements specifically applicable to Division 26 Sections.

1.3 DESCRIPTION OF WORK

A. The work required under this Division shall include all materials, labor and auxiliaries required to install a complete and properly operating electrical system.

B. The Contractor shall furnish, perform, or provide all labor including planning, purchasing, transporting, storing, installing, testing, cutting and patching, trenching, excavating, backfilling, coordination, field verification, equipment (installation and safety), supplies, and materials necessary for the correct installation of complete electrical systems (as described or implied by these specifications and the applicable drawings) in strict accordance with applicable codes, which may not be repeated in these specifications, but are expected to be common knowledge of qualified Bidders.

C. The Division 26 Sections refer to work required in addition to (or above) the minimum requirements of the NEC and applicable local codes. All work shall comply with all applicable codes as a minimum and with the additional requirements called for in these Contract Documents.

D. Only trained and qualified personnel shall be used by the Contractor to perform work. The Contractor shall not perform work which violates applicable Codes, even if called for in the Contract Documents. The Contractor's Bid shall include work necessary to completely install the electrical systems indicated by the Contract Documents in accordance with applicable Codes.

E. Refer to other Division 26 Sections for additional work requirements.

F. Connections of all items using electric power shall be included under this division of the specifications, including necessary wire, conduit, circuit protection, disconnects and accessories. Securing of roughing-in drawings and connection information for equipment involved shall also be included under this division. See other divisions for specifications for electrically operated equipment.

1.4 WORK SEQUENCE

A. Install work in stages and/or phases to accommodate Owner's occupancy requirements. Coordinate electrical schedule and operations with Owner and Architect/Engineer.

1.5 CODES, FEES, AND STANDARDS

A. Conform to all applicable requirements of Section 26 05 09 Reference Standards and

Regulatory Requirements.

B. Material shall be new and free of defects with UL listing or be listed with an approved, nationally recognized Electrical Testing Agency if and only if UL listing is not available for material.

1.6 PROJECT/SITE CONDITIONS

A. Install Work in locations shown or described in the Contract Documents, unless prevented by Project conditions.

B. The Contractor shall install all equipment so that all Code required and manufacturer recommended servicing clearances are maintained. Contractor shall be responsible for the proper arrangement and installation of all equipment within any designated space. Should the Contractor determine that a departure from the Contract Documents is necessary, he shall submit to the A/E, for approval, detailed drawings of his proposed changes with his written reasons for the changes. No changes shall be implemented by the Contractor without the issuance of the required drawings, clarifications, and/or change orders.

C. The Contractor shall verify finish dimensions at the project site in preference to using dimensions noted on Contract Documents.

1.7 INVESTIGATION OF SITE

A. Check site and existing conditions thoroughly before bidding. Advise A/E of discrepancies or questions noted.

B. Each Bidder shall visit the site and shall thoroughly familiarize himself with existing field conditions and the proposed work as described or implied by the Contract Documents. During the course of the site visit, the electrical bidder shall verify every aspect of the proposed work and the existing field conditions in the areas of construction and demolition which will affect his work. The Contractor will receive no compensation or reimbursement for additional expenses he incurs due to failure to make a thorough investigation of the existing facilities. This shall include rerouting around existing obstructions.

C. Submission of a proposal will be construed as evidence that such examination has been made and later claims for labor, equipment or materials required because of difficulties encountered will not be recognized.

D. Existing conditions and utilities indicated are taken from existing construction documents, surveys, and field investigations. Unforeseen conditions probably exist and existing conditions shown on drawings may differ from the actual existing installation with the result being that new work may not be field located exactly as shown on the drawings. Contractor shall field verify dimensions of all site utilities, conduit routing, boxes, etc., prior to bidding and include any deviations in the contract. Notify A/E if deviations are found.

E. All existing electrical is not shown. The Contractor shall become familiar with all existing conditions prior to bidding, and include in his bid the removal of all electrical equipment, wire, conduit, devices, fixtures, etc. that is not being reused, back to its originating point.

F. The Contractor shall locate all existing utilities and protect them from damage. The Contractor shall pay for repair or replacement of utilities or other property damaged by operations in conjunction with the completion of this work.

G. Remove existing power, lighting, systems, material and equipment which are made obsolete or which interfere with the construction of the project. Reinstall power, lighting, systems, materials and equipment which are required to remain active for the facility to be fully functional.

H. All items removed and not re-used shall be immediately turned over to Owner as they are made available by renovation. Remove items from job site and deliver to Owner's storage location(s) as directed by project manager. Discard complete items which Owner elects to refuse.

I. Investigate site thoroughly and reroute all conduit and wiring in area of construction in order to maintain continuity of existing circuitry. Existing conduits indicated in Contract Documents indicate approximate locations only. Contractor shall verify and coordinate existing site conduits and pipes prior to any excavation on site. Bids shall include hand digging and all required rerouting in areas of existing conduits or pipes.

J. Work is in connection with existing buildings which must remain in operation while work is being performed. Work shall be in accord with the schedule required by the Contract. Schedule work for a minimum outage to Owner. Notify Owner 72 hours in advance of any shut-down of existing systems. Perform work during non-school operating hours unless otherwise accepted by Owner. Protect existing buildings and equipment during construction.

K. Bid shall include all removal and relocation of all piping, fixtures or other items required for completion of alterations and new construction.

L. See Section Minor Electrical Demolition for Remodeling for additional requirements due to existing conditions.

1.8 CONTRACT DOCUMENTS

A. These specifications and applicable drawings shall be considered supplementary, one to the other and are considered Contract Documents. All workmanship, methods, and/or material described or implied by one and not described or implied by the other shall be furnished, performed, or otherwise provided just as if it had appeared in both sets of documents.

B. Where a discrepancy or conflict is found between these specifications and any applicable drawing, the Contractor shall notify the A/E in written form. In the event that a discrepancy exists between specifications and any applicable drawing, the most stringent requirement shall govern unless the discrepancy conflicts with applicable codes wherein the code shall govern. The most stringent requirement shall be that work, product, etc which is the most expensive and costly to implement.

C. The drawings are diagrammatic and are not intended to include every detail of construction, materials, methods, and equipment. They indicate the result to be achieved by an assemblage of various systems. Coordinate equipment locations with Architectural and Structural drawings. Layout equipment before installation so that all trades may install equipment in spaces available. Coordinate installation in a neat and workmanlike manner.

D. Wiring arrangements for equipment shown on the drawings are intended to be diagrammatic and do not show all required conductors and functional connections. All wiring and appurtenances required for the proper operation of all equipment to be connected shall be provided.

E. Specifications require the Contractor to provide shop drawings which shall indicate the fabrication, assembly, installation, and erection of a particular system's components. Drawings that are part of the Contract Documents shall not be considered a substitute for required shop drawings, field installation drawings, Code requirements, or applicable standards.

F. Locations indicated for outlets, switches, and equipment are approximate and shall be verified by instructions in specifications and notes on the drawings. Where instructions or notes are insufficient to locate the item, notify the A/E.

G. The Contractor shall take finish dimensions at the project site in preference to scaling dimensions on the drawings.

H. Where the requirements of another division, section, or part of these specifications exceed the requirements of this division those requirements shall govern.

1.9 MATERIALS AND EQUIPMENT

A. Material shall be new (except where specifically noted, shown or specified as "Reused") and/or denoted as existing) and shall be UL listed and bear UL label. Where no UL label listing is available for a particular product, material shall be listed with an approved, nationally recognized Electrical Testing Agency. Where no labeling or listing service is available for certain types of equipment, test data shall be submitted to prove to the Engineer that equipment meets or exceeds available standards.

B. Where Contract Documents list design selection or manufacturer, type, this model shall set the standard of quality and performance required. Where no brand name is specified, the source and quality shall be subject to A/E's review and acceptance. Where Contract Documents list accepted substitutions, these items shall comply with Section Substitutions and requirements.

C. When a product is specified to be in accordance with a trade association or government standard and at the request of A/E the Contractor shall furnish a certificate that the product complies with the referenced standard and supporting test data to substantiate compliance.

D. Where multiple items of the same equipment or materials are required, they shall be the product of a single Manufacturer.

E. Where the Contract Documents require materials and/or equipment installed, pulled, or otherwise worked on, the materials and/or equipment shall be furnished and installed by the Contractor responsible for Division 26 methods and materials unless specifically noted otherwise.

F. Where the contract documents refer to the terms "furnish," "install," or "provide," or any combination of these terms) the materials and/or equipment shall be supplied and delivered to the project including all labor, unloading, unpacking, assembly, erection, anchoring, protecting supplies and materials necessary for the correct installation of complete system unless specifically noted otherwise.

G. Before the Contractor orders equipment, the physical size of specified equipment shall be checked to fit spaces allotted on the drawings, with NEC working clearances provided. Internal access for proposed equipment substitutions shall be provided.

H. Electrical equipment shall be protected from the weather during shipment, storage, and construction per manufacturer's recommendations for storage and protection. Should any apparatus be subjected to possible damage by water, it shall be thoroughly dried and put through a dielectric test, at the expense of the Contractor, to ascertain the suitability of the apparatus, or it shall be replaced without additional cost to the Owner. No additional time will be allowed and the project completion date shall be maintained.

I. Inspect all electrical equipment and materials prior to installation. Damaged equipment and materials shall not be installed or placed in service. Replace or repair and test damaged equipment in compliance with industry standards at no additional cost to the Owner. Equipment required for the test shall be provided by the Contractor with no additional cost to the Contract.

J. Material and equipment shall be provided complete and shall function up to the specified

capacity/function. Should any material and/or equipment as a part or as a whole fail to meet performance requirements, replacements shall be made to bring performance up to specified requirements. Damages to finish by such replacements, alterations, or repairs shall be restored to prior conditions, at no additional cost to the Owner.

K. Where tamperproof screws are specified or required, Phillips head or Allen head devices shall not be accepted. For each type used, provide Owner with three tools. Owner will designate the specific hardware design to correspond with existing devices elsewhere in the building, to limit special tool requirements.

L. Where the Contract Documents denote equipment and/or material to be 'new' and/or 'existing' and also provide no denotation for other equipment as to it being 'new' and/or 'existing,' this is not to infer that the non-denoted equipment is either new or existing, or opposite of the equipment that is denoted. The use of the terms 'new' or 'existing' is meant to clarify denoted equipment/materials for that item only, and the lack of the terms 'new' or 'existing' in relation to identifiers/notes/denotations on the drawings is not to infer that this non-denoted equipment or materials is new or existing.

1.10 SUPERVISION OF THE WORK

A. Reference the General Conditions for additional requirements.

B. The Contractor shall provide experienced, qualified, and responsible supervision for work. A competent foreman shall be in charge of the work in progress at all times. If, in the judgement of the A/E, the foreman is not performing his duties satisfactorily, the Contractor shall immediately replace him upon receipt of a letter of request from the A/E. Once a satisfactory foreman has been assigned to the work, he shall not be withdrawn by the Contractor without the written consent of the A/E.

C. Provide field superintendent who has had a minimum of four (4) years previous successful experience on projects of comparable size and complexity. Superintendent shall be on the site at all times during construction and must have, as a minimum, an active Journeyman's Electrical License in the State of Florida.

D. Superintendent shall be employed by a currently licensed Florida Certified Electrical Contractor (EC).

1.11 COORDINATION

A. Provide all required coordination and supervision where work connects to or is affected by work of other trades, and comply with all requirements affecting this Division. Work required under other divisions, specifications or drawings to be performed by this Division shall be coordinated with the Contractor and such work performed at no additional cost to Owner.

B. Contractor shall obtain set of Contract Documents from Owner for all areas of work noted above and include all electrical work in bid whether included in Division 26 Sections or not.

C. Installation studies shall be made to coordinate the electrical work with other trades. Work shall be preplanned. Unresolved conflicts shall be referred to the A/E prior to installation of the equipment for final resolution.

D. For locations where several elements of electrical or combined mechanical and electrical work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings at 1/4" scale showing the actual physical dimension required for the installation to assure proper integration of equipment with building systems and NEC required clearances. Coordination drawings shall be provided for all areas of conflict as determined by

the A/E.

E. Secure accepted shop drawings from all required disciplines and verify final electrical characteristics before roughing power feeds to any equipment. When electrical data on accepted shop drawings differs from that shown or called for in Construction Documents, make adjustments to the wiring, disconnects, and branch circuit protection to match that required for the equipment installed.

F. Damage from interference caused by inadequate coordination shall be corrected at no additional cost to the Owner and the contract time for completion will not be extended.

G. The Contractor shall maintain an up-to-date set of Contract Documents (Drawings and Specifications) of all trades on the project site, including Mechanical and Electrical.

H. The Contract Documents describe specific sizes of switches, breakers, fuses, conduits, conductors, motor starters and other items of wiring equipment. These sizes are based on specific items of power consuming equipment (heaters, lights, motors for fans, compressors, pumps, etc.). The Contractor shall coordinate the requirements of each load with each load's respective circuitry shown and with each load's requirements as noted on its nameplate data and manufacturer's published electrical criteria. The Contractor shall adjust circuit breaker, fuse, conduit, and conductor sizes to meet the actual requirements of the equipment being provided and installed and change from single point to multiple points of connection (or vice versa) to meet equipment requirements. Changes due to these coordination efforts shall be made at no additional cost to the Owner.

1.12 PROVISION FOR OPENINGS

A. Locate openings required for work. Provide sleeves, guards or other accepted methods to allow passage of items installed.

B. Coordinate with roofing Contractor on installation of electrical items which pierce roof. Roof penetrations shall not void roof warranty.

C. Where work pierces waterproofing, it shall maintain the integrity of the waterproofing. Coordinate roofing materials which pierce roof for compatibility with membrane or other roof types with Contractor prior to installation.

1.13 SURFACE MOUNTED EQUIPMENT

A. Surface mounted fixtures, outlets, cabinets, conduit, panels, etc. shall have factory applied finish and/or shall be painted as directed by Engineer. Paint shall be in accordance with other applicable sections of the specifications for this project.

1.14 CUTTING AND PATCHING

A. New Construction:
   1. Reference Division 01 - General Requirements.
   2. Cutting of work in place shall be cut, drilled, patched and refinished by trade responsible for initial installation.
   3. The Contractor shall be responsible for backfilling and matching new grades with adjacent undisturbed finished surface.

B. Existing Construction:
   1. See Section Minor Electrical Demolition for Remodeling for additional requirements.

1.15 INSTALLATION

A. Erect equipment to minimize interferences and delays in execution of the work.

B. Take care in erection and installation of equipment and materials to avoid marring finishes or surfaces. Any damage shall be repaired or replaced as determined by the A/E at no additional cost to the Owner.

C. Equipment requiring electrical service shall not be energized or placed in service until A/E is notified and is present or have waived their right to be present in writing. Where equipment to be placed in service involves service or connection from another Contractor or the Owner, the Contractor shall notify the Owner in writing when the equipment will be ready. The Owner shall be notified as far in advance as possible of the date the various items of equipment will be complete.

D. Equipment supports shall be secured and supported from structural members except as field accepted by the A/E in writing.

E. Plywood material shall not be used as a backboard for mounting panel boards, disconnects, motor starters, and dry type transformers. Provide "cast in place" type inserts or install expansion type anchor bolts. Electrical equipment shall not be mounted directly to dry wall for support without additional channels as anchors. Channels shall be anchored to the floor and structure above. Panelboards and terminal cabinets shall be provided with structural framing located within drywall partitions.

F. The Contractor shall keep the construction site clean of waste materials and rubbish at all times. Upon completion of the work, the Contractor shall remove from the site all debris, waste, unused materials, equipment, etc.

G. Inserts, pipe sleeves, supports, and anchorage of electrical equipment shall be provided. Where items are to be set or embedded in concrete or masonry, the items shall be furnished and layout made prior to the setting or embedment thereof, so as to cause no delay to the project schedule.

1.16 PROGRESS AND RECORD DRAWINGS

A. Keep two sets of blueline prints on the job, and neatly mark up design drawings each day as components are installed. Different colored pencils shall be used to differentiate each system of electrical work. Cost of prints and this labor task shall be included under this Division. All items on Progress Drawings shall be shown in actual location installed. Change the equipment schedules to agree with items actually furnished.

B. Prior to request for substantial completion observation, furnish a set of neatly marked prints showing "as-installed" (as-built) condition of all electrical installed under this Division of the specifications. Marked up prints are to reflect all changes in work including change orders, field directives, addenda from bid set of Contract Documents, request for information responses, etc. Marked up set of prints to show:
   1. All raceways 1-1/2" and above, exactly as installed.
   2. All site raceways exactly as installed.
   3. Any combining of circuits (which is only allowed by specific written permission) or change in homerun outlet box shall be made on as-builts.
   4. Any circuit number changes on plan shall be indicated on as-builts.
   5. Any panelboard schedule changes shall be indicated on as-builts and final panelboard schedules..

C. Marked up prints as noted above are to be submitted to A/E for review. Contractor shall review submitted "as-builts" with Engineer in the field. Contractor shall verify every aspect for

accuracy.

D. After acceptance of marked up prints by A/E with all changes, additions, etc. included on accepted marked up prints, submit set prior to request for final payment and/or request for final observation.

E. Where the Contractor has failed to produce representative "as-built" drawings in accordance with requirements specified herein, the Contractor shall reimburse Engineer all costs to produce a set of "as-built" drawings to the Architect/Owner satisfaction.

1.17 "OBSERVATION OF WORK" REPORT

A. Reference the General Conditions.

B. Items noted by A/E or his representative during construction and before final acceptance which do not comply with the Contract Documents will be listed in a "Observation of Work" report which will be sent to the Contractor for immediate action. The Contractor shall correct all deficiencies in a prompt concise manner. After completion of the outstanding items, provide a written confirmation report for each item to the A/E. The report shall indicate each item noted, and method of correction. Enter the date on which the item was corrected, and return the signed reports so items can be rechecked. Failure to correct the deficiencies in a prompt concise manner or failure to return the signed reports shall be cause for disallowing request for payments.

C. Items noted after acceptance during one-year guarantee period shall be checked by the Contractor in the same manner as above. The signed reports are to be returned by him when the items have been corrected.

1.18 SYSTEMS WARRANTY

A. Reference the General Conditions.

B. The work shall include a one-year warranty. This warranty shall be by the Contractor to theOwner for any defective workmanship or material which has been furnished at no cost to the Owner for a period of one year from the date of substantial completion of each System. Warranty shall not include lamps in service after one month from date of substantial completion of the System. Explain the provisions of warranty to the Owner at the "Demonstration of Completed System" meeting to be scheduled with the Owner upon project completion.

C. Where items of equipment or materials carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material.

D. Where extended warranty or guarantee are called for herein, furnish three copies to be inserted in Operation and Maintenance Manuals.

E. All preventative maintenance and normal service will be performed by the Owner's maintenance personnel after final acceptance of the work which shall not alter the Contractor's warranty.

1.19 WASTE MATERIALS DISPOSAL

A. Contractor shall include in his bid the transport and disposal or recycling of all waste materials generated by this project in accordance with all rules, regulations and guidelines applicable. Contractor shall comply fully with Florida statute 403.7186 regarding mercury containing devices and lamps. Lamps, ballasts and other materials shall be transported and disposed of

in accordance with all DEP and EPA guidelines applicable at time of disposal. Contractor shall provide owner with written certification of accepted disposal.

1.20 SUBSTANTIAL COMPLETION

A. The Contractor shall be fully responsible for contacting all applicable parties (Engineer and Owner's Representative) to schedule required observations of the work by Engineer. A minimum of 120 hours notice shall be given for all required observations of the work by Engineer, and minimum of 7 days for substantial completion observation. Time and date shall be agreed on by all applicable parties in writing.

B. Work shall be complete as required by authorities having jurisdiction and the general conditions of the contract prior to request for substantial completion observation. Work must be deemed substantially complete by A/E to fulfill requirements.

1.21 PROHIBITION OF ASBESTOS AND PCB

A. The use of any process involving asbestos or PCB, and the installation of any product, insulation, compound of material containing or incorporating asbestos or PCB, is prohibited. The requirements of this specification for complete and operating electrical systems shall be met without the use of asbestos or PCB.

B. Prior to the final review field visit, the Contractor shall certify in writing that the equipment and materials installed in this Project under Division 26 contain no asbestos or PCB's. Additionally, all manufacturers shall provide a statement with their submittal that indicates that their product contains no asbestos or PCB's. This statement shall be signed and dated by a duly authorized agent of the manufacturer.

PART 2 - PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 26 0503

EQUIPMENT WIRING SYSTEMS

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 DESCRIPTION OF SYSTEM

A. Provide and install all equipment, labor, material, accessories, and mounting hardware for a complete and operating system for the following:

1. Electrical connections to equipment specified under other sections.

1.3 RELATED SECTIONS

A. Summary of Work

B. Conduit

C. Building Wire and Cable

D. Boxes

1.4 REFERENCES

A. NEMA WD 1 - General Requirements for Wiring Devices

B. NEMA WD 6 - Wiring Devices-Dimensional Requirements

C. ANSI/NFPA 70 - National Electrical Code.

1.5 SUBMITTALS

A. Submit under provisions of the General Requirements of the Contract Documents and Section 26 05 07 Submittals.

1.6 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.7 COORDINATION

A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other sections.

B. Determine connection locations and requirements.

C. Sequence rough-in of electrical connections to coordinate with installation schedule for

equipment.

D. Sequence electrical connections to coordinate with start-up schedule for equipment.

PART 2 - PRODUCTS

2.1 CORDS AND CAPS

A. Attachment Plug Construction: Conform to NEMA WD 1.

B. Configuration: NEMA WD 6; match receptacle configuration at outlet provided for equipment.

C. Cord Construction: ANSI/NFPA 70, Type SO multiconductor flexible cord with identified equipment grounding conductor, suitable for use in damp locations.

D. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify conditions under provisions of Section 26 01 05 Investigation of Existing Electrical Systems.

B. Verify that equipment is ready for electrical connection, wiring, and energization.

3.2 ELECTRICAL CONNECTIONS

A. Make electrical connections in accordance with equipment manufacturer's instructions.

B. Make conduit connections to equipment using flexible conduit. Use liquid tight flexible conduit with watertight connectors in damp or wet locations (including inside of coolers/freezers).

C. Make wiring connections using wire and cable with insulation suitable for temperatures encountered in heat producing equipment and in cooler/freezers.

D. Provide receptacle outlet where connection with attachment plug is required. Provide cord and cap where field-supplied attachment plug is required.

E. Provide suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.

F. Install disconnect switches, controllers, control stations, and control devices as required.

G. Modify equipment control wiring with terminal block jumpers as required.

H. Provide interconnecting conduit and wiring between devices and equipment where required.

3.3 EQUIPMENT CONNECTION SCHEDULE

A. By local authority and as required for a complete and operating service.

END OF SECTION

SECTION 26 0506

DEMONSTRATION OF COMPLETED ELECTRICAL SYSTEMS

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 the requirements for demonstration of completed electrical systems:

B. Demonstrate to Owner the essential features of the following electrical systems:

1. Communications Systems

a) Each system included in Systems sections.

2. Electrical Entrance Equipment

a) Circuit breakers

b) Fuses and fuseholders

3. Miscellaneous Electrical Equipment

a) Electrical systems controls and equipment

b) Electrical power equipment

4. Distribution Equipment

a) Lighting and appliance panelboards

C. Upon completion of testing, each system is to be demonstrated only once.

1.3 TIME

A. The demonstration shall be held upon completion of testing of all systems at a date to be agreed upon in writing by the Owner or his representative.

1.4 ATTENDING PARTIES

A. The demonstration shall be held by this Contractor in the presence of the Owner and the manufacturer's representative.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 DEMONSTRATION

A. Demonstrate the function and location (in the structure) of each system and indicate its

relationship to the riser diagrams and drawings.

B. Demonstrate by "start-stop operation" how to work the controls, how to reset protective devices, how to replace fuses, and what to do in case of emergency.

C. Performance Verification and Demonstration to Owner

1. Submit Check Out Memo form for each item, equipment and system. Copy to be included in each Operation and Maintenance Manual.

END OF SECTION

CHECK OUT MEMO

Check Out Memo shall be completed and a copy provided to the Owner at the Owner's Performance Verification and Demonstration Meeting. A copy shall also be included in the specification section of each O & M Manual for the equipment checked.

Project Name_____

Type of Equipment Checked_____

Equipment Number_____

Equipment Manufacturer_____

Signature below by the manufacturer's authorized representative signifies that the equipment has been satisfactorily tested and checked out on the job by the manufacturer.

1. The attached Test and Data and Performance Verification information was used to evaluate the equipment installation and operation.

2. The equipment is properly installed, has been tested by the manufacturer's authorized representative, and is operating satisfactorily in accordance with all requirements, except for items noted below.*

3. Written operating and maintenance information has been presented and reviewed in detail with the Contractor.

4. Sufficient copies of all applicable operating and maintenance information, parts lists, lubrication checklists, and warranties have been furnished to the Contractor for insertion in the Operation and Maintenance Manuals.

CHECKED BY:

_____
MANUFACTURER'S REPRESENTATIVE (print)

_____
ADDRESS

_____
TELEPHONE, FAX, E-MAIL

_____
MANUFACTURER'S REPRESENTATIVE (signature, title)

_____
DATE CHECKED

WITNESSED BY:

_____
CONTRACTOR'S REPRESENTATIVE (signature, title)

***EXCEPTIONS NOTED AT TIME OF CHECK-OUT (USE ADDITIONAL PAGE IF NECESSARY)**

SECTION 26 0507

SUBMITTALS

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. Requirements for submittals specifically applicable to Division 26 Sections.

B. See Section Substitutions for additional requirements when submittal consists of accepted substitution equipment.

1.3 SUBMITTAL OF "ACCEPTED SUBSTITUTE" EQUIPMENT/PRODUCT

A. Representation: In submitting item, equipment, product, etc. that has been listed on contract drawings, in contract documents or in an addenda, Contractor represents that he:

1. Has investigated substituted item and has determined that it is equal or superior to specified product in all aspects and that use of substituted item will not require any additional time to the Contract.

2. Will coordinate installation of accepted substitution into work, making changes as may be required to complete work in all aspects.

3. Waives all claims for additional costs related to substitution which may subsequently become apparent.

4. Will provide the same warranties for the substitution as for the product specified.

5. Will absorb all costs incurred by the substitution when affecting other trades including but not limited to electrical, structural, architectural, etc.

6. Will absorb any cost incurred by the Engineer in review of the substituted product if the acceptance of the substituted item creates the need for system modification and/or redesign, or if the substituting contractor exhibits negligence in his substituting procedure thus submitting inferior, misapplied or miss-sized equipment. In the event of additional engineering costs, the billing structure shall be agreed upon prior to review by all involved parties.

B. Substitutions that cannot meet space requirements or other requirements of these Specifications, whether accepted or not, shall be replaced at the Contractor's expense with no additional time added to the Contract.

1.4 SUBMITTALS

A. Submittals shall initially be created and submitted in PDF format. Once approved Contractor shall print hard copies of approved submittals and provide Owner with hard copies.

B. Hard copies of submittals for Owner shall consist of a minimum of one view type 3-ring binder, white, sized to hold 8-1/2" x 11" sheets for "ELECTRICAL SUBMITTALS" (Power and Lighting).

Submittals shall consist of a minimum of one view type 3-ring binder, white, sized to hold 8-1/2" x 11" sheets for "ELECTRICAL SUBMITTALS" (Power and Lighting).

1. Binder is to be adequately sized to comfortably hold required submittals. Minimum spline size to be 1", maximum spline size to be 3" (provide additional binders if 3" size is not sufficient to properly hold submittals).
2. Binder cover and spline to have outer clear vinyl pockets. Provide correct designation of project in each pocket; see Binder Examples for Submittals included at end of this Section. Description sheet is to be white with black letters, minimum of 11" high and full width of pocket. Description is to describe project and match project drawing/project manual description. Description to include submittal type, i.e., "ELECTRICAL SUBMITTALS" for Power and Lighting.

C. Submittals Binders to include:

1. First sheet shall be prepared and filled out by Contractor and shall list project addresses, telephones, etc.; see "PROJECT ADDRESSES" Form included at end of this section.

2. Second sheet in binder shall be a photocopy of the Electrical Index pages in Specifications.

3. Provide reinforced separation sheets tabbed with the appropriate specification reference number and typed index for each section in the Systems Schedule.

4. Submittals consisting of marked catalog sheets or shop drawings shall be inserted in the binder in proper order. Submittal data shall be presented in a clear and thorough manner. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Markings shall be made with arrows or circles (highlighting is not acceptable).

5. Shop Drawings: Drawings to include identification of project and names of Architect, Engineer, General Contractor, subcontractor and supplier, data, number sequentially and indicate the following:

   a) Fabrication and erection dimensions.

   b) Arrangements and sectional views.

   c) Necessary details, including complete information for making connections with other work.

   d) Kinds of materials and finishes.

   e) Descriptive names of equipment.

   f) Modifications and options to standard equipment required by the work.

   g) Leave blank area, size approximately 4 by 2 1/2 inches, near title block (for A/E's stamp imprint).

   h) In order to facilitate review of drawings, insofar as practicable, they shall be noted, indicating by cross reference the contract drawings, note, and specification paragraph numbers where items occur in the Contract Documents.

   i) Conduit/raceway rough-in drawings.

   j) Items requiring shop drawings include (but not limited to):

1. Special and/or modified equipment.

2. U.L. listed fire and smoke stopping assemblies for each applicable penetration

k) See specific sections of Specifications for further requirements.

6. Product Data: Technical data is required for all items as called for in the Specifications regardless if item furnished is as specified.

a) Submit technical data verifying that the item submitted complies with the requirements of the Specifications. Technical data shall include manufacturer's name and model number, dimensions, weights, electrical characteristics, and clearances required. Indicate all optional equipment and changes from the standard item as called for in the Specifications. Furnish drawings, or diagrams, dimensioned and in correct scale, covering equipment, showing arrangement of components and overall coordination.

b) In order to facilitate review of product data, insofar as practicable, they shall be noted, indicating by cross reference the contract drawings, note, and/or specification paragraph numbers where and/or what item(s) are used for and where item(s) occur in the contract documents.

c) See specific sections of Specifications for further requirements.

1.5 PROCESSING SUBMITTALS

A. Submit under provisions of the General Requirements of the Contract and this section of the Specifications, whichever is the most strict.

B. Submittals with marking on each section shall be submitted under provisions of General Requirements of the Contract, Division 01, and this and other sections of the Specifications. PDF file for each specification section shall have a consistent file naming convention that includes the specification section number and the submittal number for section. Initial set of PDF files shall include submittal for each of the following:

1. Project Addresses

2. Index

3. Separation Sheets

4. Basic Materials

5. Long Lead Items

C. Remainder of submittals are to be submitted no later then 60 days after award of contract or 60 days prior to Request for Substantial Completion whichever is earlier.

D. The Contractor shall review all submittals before submitting to the A/E. No request for payment will be considered until the submittals have been reviewed and submitted for approval.

E. Product Data: For standard manufactured materials, products and items, submit electronically annotated PDF files of manufacturers product data sheets. If submittal is rejected, resubmittal shall contain a complete set of new data sheets.

F. Shop Drawings: For custom fabricated items and systems installations.

G. Shop Drawing Review Notation.

	Action	Description
1.	No Exception Noted	No exceptions taken. Resubmittal not required.
2.	Rejected	Not in compliance with Contract Documents. Resubmit.
3.	Submit Specific Item	Resubmit item as specified.
4.	Make Corrections Noted	Make corrections noted, resubmittal not required.
5.	Revise and Resubmit	Make corrections noted, resubmittal is required
6.	Review not Required	Not required for review. No action taken. Copy retained for reference.

H. Acceptance: When returned to Contractor, submittals will be electronically marked with A/E's stamp. If box marked "Rejected" "Revise and Resubmit" or "Submit Specific Item" is checked, submittal is not accepted and Contractor is to correct and resubmit as noted, otherwise submittal is accepted and Contractor is to comply with notation making necessary corrections on submittal. Review comments will generally not be on each individual submittal sheet, and will be on a separate sheet inserted into to shop drawing transmittal, submittal as a whole or each submittal section.

I. Note that the acceptance of shop drawings or other information submitted in accordance with the requirements specified above, does not assure that the Engineer, Architect, or any other Owner's Representative, attests to the dimensional accuracy or dimensional suitability of the material or equipment involved, the ability of the material or equipment involved or the Mechanical/Electrical performance of equipment. Acceptance of shop drawings does not invalidate the plans and Specifications if in conflict, unless a letter requesting such change is submitted and accepted on the Engineer's letterhead.

1.6 DELAYS

A. Contractor is responsible for delays in job progress accruing directly or indirectly from late submissions or resubmissions of shop drawings, or product data.

1.7 RE-SUBMITTALS

A. The A/E shall be reimbursed for all costs to review resubmittals subsequent to the second submission for the same product. Cost will be billed to Contractor at Engineer's standard hourly rate.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

PROJECT ADDRESSES

OWNER:

ARCHITECT:

ENGINEER:

GENERAL CONTRACTOR:

SUBCONTRACTOR:

BINDER EXAMPLES FOR SUBMITTALS

Insert In Vinyl Pockets (Front & Spline) 3-Ring Binder

Southwestern Middle School, Replace
Gymnasium Bleachers

MPE 2025-XXX
VCS 2648249

ELECTRICAL SUBMITTALS

(Size To 8-1/2" x 11")

Southwestern
Middle School,
Replace
Gymnasium
Bleachers

MPE 2025-XXX
VCS 2648249

ELECTRICAL
SUBMITTALS

(Size To 11")

SECTION 26 0508

SUBSTITUTIONS

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. This Section specifies general, administrative and procedural requirements for substitutions for Divisions 26 above and beyond the requirements of Division 01 General Requirements and any Supplemental requirements/conditions.

B. Request for substitutions must be submitted no later than 10 days prior to bid due date.

C. Request for substitution will not be considered after bid due date.

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: Products, materials, equipment, finishes, and methods of construction are considered substitutions if they meet any one of the following conditions:

1. Does not meet all the requirements of these specifications under Part 1 - General or Part 2 - Products for any section included in Division 26.

2. Is a different design which accomplishes the same result as that design specified in Division 26 Sections.

3. Is of similar or different design that:

a) Requires more space.

b) Requires more power.

c) Requires changes in other elements of the work such as (but not limited to) architectural, mechanical, structural, or other electrical work.

d) Affects the construction schedule.

4. Is listed in these specifications on the Contract Documents or in any addenda as an accepted substitution.

1.4 REQUEST FOR SUBSTITUTION SUBMITTALS (10 Days Prior to Bid Due Date)

A. A separate request for substitutions shall be submitted for each product, material, etc. that is defined as a substitution.

B. Submittal must consist of written request for substitution with data as required below. Request must be very specific as to what specified item, request for substitution is submitted for.

C. Each request for substitution submittal for each product, etc. shall include:

1. Name of material or equipment for which it is to be substituted.

2. Drawings, product data, performance data and/or other information necessary for the engineer to determine that the equipment meets all specifications and requirements.

3. Compliance Statement. Each request shall include the following compliance statement typed on letterhead of submitting company:

a) Submittal complies with all aspects/requirements of Contract Documents. (Yes or No). If no, state deviance.

b) Submittal complies with all applicable codes. (Yes or No). If no, state deviance.

c) Submittal complies with all other elements of the work and does not require any other changes. (Yes or No). If No, state required change.

d) Meets or exceeds the performance of specified product. (Yes or No). If no, state required change.

1.5 REQUEST FOR SUBSTITUTION SUBMITTALS (AFTER BID)

A. Substitution requests submitted after bid will not be reviewed.

B. Submittals for items noted as an Accepted Substitution on Contract Drawings, these specifications, or listed in an addenda, shall be submitted as required in Section 26 05 07 Submittals.

1.6 CONSIDERATION AND ACCEPTANCE

A. Request for substitutions will not be considered if:

1. Submittal does not comply with all requirements as noted above or contain all information required above.

2. If submittal does not contain Compliance Statement, fully filled out.

3. If Compliance Statement contains a 'no' or 'N'.

4. Submittals are submitted beyond time limitations noted above.

B. Samples.

1. Sample may be required to be submitted, if deemed necessary by the A/E to determine if the substitution meets specifications.

2. Where required by A/E on an individual basis, samples may be required after written notice of acceptance and approval has been made of each substitution.

3. The A/E reserves the right to reject sample and consequently the substitution should the sample not meet the requirement of the contract documents.

C. Substitutions will be considered on basis of design, concept of the Work, and overall conformance with information given in Contract Documents, including but not limited to:

1. Design criteria, which shall be equal or superior to the specified item.

2. Finishes, which shall be identical or superior to finishes of specified product.

3. Lenses or louvers, which shall be identical size, thickness and type material specified.

4. Physical size and dimension which are identical or within design criteria limitations as determined by the Engineer.

5. Photometric data, which shall be identical or superior in quantity and quality.

6. Trim detail and mechanical qualities, which shall be identical or within design criteria limitations as determined by the Engineer.

D. The Engineer's decision on acceptance or rejection of substitutions will be final.

E. Substitution requests, if accepted will be included in an addenda.

F. Approval of a substituted item or listing a substituted item as an accepted substitution, does not modify or act as a waiver in any way, the requirements of the contract documents. See Section Submittals for additional requirements on accepted substitution submittals, equipment, etc.

G. The naming of any manufacturer as an accepted substitution does not imply automatic approval as a substitution. It is the sole responsibility of the Contractor to ensure that any price quotations received and submittals made are for systems that meet or exceed these specifications.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 26 0509

REFERENCE STANDARDS AND REGULATORY REQUIREMENTS

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. Reference Standards and Regulatory Requirements applicable to Division 26 sections.

1.3 REFERENCES

A. The following references may be referenced within these specifications:

AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AHERA	Asbestos Hazard Emergency Response Act
AIA	American Institute of Architects
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	ASME International American Society of Mechanical Engineers International
ASTM	ASTM International American Society for Testing and Materials International
BICSI	BICSI, Inc.
BOCC	Board of County Commissioners Volusia County
COD	City of Deltona
CRSI	Concrete Reinforcing Steel Institute
DCA-ADAIA	Department of Community Affairs - Florida Americans with Disabilities Accessibility Implementation Act
DCA-ADAAG	Department of Community Affairs - Florida Americans with Disabilities Act Accessibility Guidelines
DCA-ARM	Department of Community Affairs - Accessibility Requirements Manual

DMS/DOC	Department of Management Services Division of Communications
DOCA or DCA	State of Florida Department of Community Affairs
EIA/TIA	Electronics Industries Alliance/Telecommunications Industry Association
EJCDC	Engineers Joint Contract Documents Committee American Consulting Engineers Council
FAC	Florida Administrative Code
FBC	Florida Building Code
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FFPC	Florida Fire Prevention Code
FGC	Florida Building Code (Fuel Gas)
FLA	State of Florida
FMC	Florida Building Code (Mechanical)
FMG	FM Global (formerly Factory Mutual System)
FPC	Florida Building Code (Plumbing)
FS	Florida Statutes
ICC	International Code Council
IEEE	Institute of Electrical and Electronics Engineers, Inc
IES	Illumination Engineering Society of North America
ICPEA	International Power Cable Engineer's Association
LPCR	Local Power Company Requirements
LPI	Lightning Protection Institute
LTCR	Local Telephone Company Requirements
NEC	National Electrical Code
NECPA	National Energy Conservation Policy Act
NESC	National Electrical Safety Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association

OEF	Office of Educational Facilities
OSHA	Occupational Safety and Health Act
SBE	State Board of Education
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
UFSRS	Uniform Fire Safety Rules and Standards of Insurance Division of State Fire Marshal
UL	Underwriters Laboratories, Inc.
VCS	Volusia County Schools
VCSB	Volusia County School Board
SREF	Florida Building Code Section 453 State Requirements for Educational Facilities

1.4 REGULATORY REQUIREMENTS

A. Conform to all the applicable requirements of the following codes, standards, guidelines, etc.. If there should be conflicting requirements between these codes, standards, guidelines, etc., the more or most stringent requirement shall apply that does not violate any codes or laws.

1. Standards and Miscellaneous Codes/Requirements (Comply with latest edition or notice available unless otherwise adopted by Authority Having Jurisdiction):

a) Americans with Disabilities Act of 1990, as amended
b) ADA Standards for Accessible Design, 2010
c) American National Standards Institute
d) American Society of Heating, Refrigerating and Air Conditioning Engineers
e) American Society of Mechanical Engineers
f) American Society for Testing and Materials
g) Concrete Reinforcing Steel Institute
h) Department of Community Affairs
i) Electronics Industries Association/Telecommunications Industry Association
j) Florida Building Code, 7th edition 2020
k) Florida Fire Prevention Code, 7th edition 2020
l) Institute of Electrical and Electronics Engineers
m) Illumination Engineering Society
n) Local Power Company Requirements
o) Lightning Protection Institute
p) Local Telephone Company Requirements
q) National Electrical Code, 2017
r) National Energy Conservation Policy Act
s) National Electrical Safety Code
t) National Electrical Manufacturers Association
u) NFPA 1 Fire Code, 2018 edition with Florida Amendments
v) NFPA 101 Life Safety Code, 2018 edition with Florida Amendments
w) Occupational Safety and Health Act
x) Safety Code for Elevators and Escalators, A17.1 (2016)
y) Safety Code for Existing Elevators and Escalators, A17.3 (2015)
z) Sheet Metal and Air Conditioning Contractors
aa) Underwriters Laboratories, Inc.

bb) Applicable Federal, State, Local Codes, Laws and Ordinances, Florida Statutes and Referenced Codes/Standards

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 26 0510

ELECTRICAL SYMBOLS AND ABBREVIATIONS

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. Symbols and abbreviations specifically applicable to all Division 26 sections in addition to those in Division 01 - General Requirements and any supplemental requirements/conditions.

1.3 SYMBOLS

A. In general the symbols used on the drawings conform to the Standard Symbols of the Institute of Electrical and Electronic Engineers with the exception of special systems or agencies as hereinafter noted.
Corps of Engineers.
Special Symbols as shown in schedules or legends.

1.4 ABBREVIATIONS

A. The following abbreviations or initials are used.

A/C	Air Conditioning
AFD	Adjustable Frequency Drive
A.C.	Alternating Current
ADD #	Addendum #
A/E	Architect/Engineer (or Engineer when Architect not applicable)
AFF	Above Finished Floor
AFG	Above Finished Grade
AHU	Air Handler Unit
AIC	Amps Interrupting Capacity
AL	Aluminum
ALT	Alternate
AMP	Ampere
ANSI	American National Standards Institute
AWG	American Wire Gauge
@	At
B.C.	Bare Copper
BIDS	Baggage Information Display System
BLDG	Building
BRKR	Breaker
BTU	British Thermal Unit
BTUH	BTU Per Hour
C.	Conduit
C.B.	Circuit Breaker
CBM	Certified Ballast Manufacturers
cd	Candela
CFM	Cubic Feet per Minute
CKT.	Circuit
CKT BRKR	Circuit Breaker
C/L	Center Line

Clg.	Ceiling
Comp.	Compressor
Conn.	Connection
Cond.	Condenser
Cont.	Continuous
C.R.I.	Color Rendering Index
C.T.	Current Transformer
CU.	Copper
C.U.	Compressor Condenser Unit
C.W.	Cold Water
D.B.	Direct Burial
D.C.	Direct Current
Disc.	Disconnect
DN.	Down
DPST	Double Pole Single Throw
DWG	Drawing
E.C.	Electrical Contractor (or General Contractor)
ELEV.	Elevator
EMT	Electrical Metallic Tubing
Equip.	Equipment
EST	Estimate
FAAP	Fire Alarm Annunciator Panel
FACP	Fire Alarm Control Panel
FARP	Fire Alarm Remote Panel
FATC	Fire Alarm Terminal Cabinet
FCCP	Fire Alarm Command Center Panel
FHC	Fire Hose Cabinet
FIDS	Flight Information Display System
FLA	Full Load Amperes
FT.	Feet
FLR	Floor
F.C.	Footcandles
FVNR	Full Voltage Non-Reversing
GAL.	Gallon
Galv.	Galvanized
GPH	Gallons per Hour
GPM	Gallons per Minute
GFI	Ground Fault Interrupting
GRS	Galvanized Rigid Steel Conduit
GND.	Ground
HTG	Heaters
HT	Height
HZ	Hertz (Cycles)
HPF	High Power Factor
HPS	High Pressure Sodium
HP	Horsepower
HR	Hour
H.S.	Heat Strip
IMC	Intermediate Metallic Conduit
Incand	Incandescent
in.	Inches
J.B.	Junction Box
KVA	KiloVolt Ampere
KW	Kilowatts
KWH	Kilowatt Hour
K	Kelvin

L.L.D.	Lamp Lumen Depreciation
LED	Light Emitting Diode
LIU	Light Interface Unit (Fiber Optic Patch Panel)
LT.	Light
LTG.	Lighting
LTS.	Lights
L.P.F.	Low Power Factor
M.C.B.	Main Circuit Breaker
M.L.O.	Main Lugs Only
Maint.	Maintenance
MH.	Manhole; Metal Halide
MFG.	Manufacturer
max.	Maximum
MCM/KCMIL	Thousand Circular Mils
MPH	Miles Per Hour
MM	Millimeter
Min.	Minimum
MCP	Motor Circuit Protector
MTD	Mounted
N.	Neutral
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
N.P.T.	National Pipe Thread
NF	Non Fused
N.C.	Normally Closed
N.O.	Normally Open
NIC.	Not in Contract
No.	Number
OB	Outlet Box
OD	Outside Diameter
O.L.	Overload
OLS	Overloads
OS&Y	Outside Screw and Yoke (Sprinkler)
%	Percent
Ø	Phase
P.	Pole
PL	Compact Fluorescent Lamp
P.T.	Potential Transformer
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PB	Pullbox
PNL	Panel
PR	Pair
Pri.	Primary
PTZ	Pan, Tilt, Zoom
PVC	Polyvinyl Chloride
Recept.	Receptacle
RPM	Revolutions per Minute
R.S.	Rapid Start
SCA	Short Circuit Amps
Sec.	Secondary
SHT	Sheet
S/N	Solid Neutral
SPST	Single Pole Single Throw
SF	Square Foot

SW.	Switch
SWBD	Switchboard
Sys.	System
THHN; THWN	Nylon Jacketed Wire
TSP	Twisted Shielded Pair
TTB	Telephone Terminal Board
TTC	Telephone Terminal Cabinet
TV	Television
TVTC	Television Terminal Cabinet
TVEC	Television Equip. Cabinet
TYP	Typical
Temp.	Temperature
U.L.	Underwriters' Laboratories
UTP	Unshielded Twisted Pair
VFD	Variable Frequency Drive
VHF	Very High Frequency
VHO	Very High Output
V	Volt
VA	Volt Amperes
Vol.	Volume
W	Wire
W.P.	Weatherproof
XFMR	Transformer
Y	Wye
Yd.	Yard
Yr.	Year
3R	Rainproof
4X	Stainless Steel Dust-tight, Watertight

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 26 0519

BUILDING WIRE AND CABLE

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. This Section includes requirements for provision and installation of building wire and cable.

B. Provide all equipment, labor, material, accessories, and mounting hardware to properly install all conductors and cables rated 600 volts and less for a complete and operating system for the following:

1. Building wire and cable.

2. Wiring connectors and connections.

C. No aluminum wiring shall be permitted.

D. All sizes shall be given in American Wire Gauge (AWG) or in thousand circular mils (MCM/kcmil).

1.3 REFERENCES:

A. ANSI/NFPA 70 National Electrical Code

B. UL 486A-486B

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

1.5 SUBMITTALS

A. Product Data: Submit catalog cut sheet showing, type and UL listing of each type of conductor, connector and termination.

B. Submit catalog cut sheet(s) showing each type of conductor is manufactured in the United States.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five years experience.

B. All building wire and cable shall be manufactured in the United States.

1.7 PROJECT CONDITIONS

A. Verify that field measurements are as shown on Drawings

B. Conductor sizes are based on copper.

C. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet project conditions.

D. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

1.8 COORDINATION

A. Determine required separation between cable and other work.

B. Determine cable routing to avoid interference with other work.

PART 2 – PRODUCTS

2.1 BUILDING WIRE AND CABLE

A. Description: Single conductor insulated wire.

B. Conductor: Stranded Copper.

C. Insulation Voltage Rating: 600 volts.

D. Insulation: ANSI/NFPA 70,

1. #10 AWG and smaller: Type THHN/THWN and XHHW.

a) THHN/THWN-2 insulation is acceptable substitute for THHN/THWN insulation.

b) XHHW-2 insulation is acceptable substitute for XHHW insulation.

2. #8 AWG and larger: Type THHN/THWN-2 and XHHW-2.

E. Acceptable Manufacturers:

1. Southwire.

2. Encore.

PART 3 – EXECUTION

3.1 GENERAL

A. Install products in accordance with manufacturer’s instructions.

B. Conductors #10 AWG or #12 AWG shall be 600 volt type THWN/THHN unless noted otherwise, rated 90 degrees C. dry, 75 degrees C. wet.

C. Conductors #8 AWG and larger shall be Type THWN-2/THHN unless noted otherwise, rated 90 degrees C, wet or dry.

D. Use stranded conductors for all feeders and branch circuits including 10 AWG and 12 AWG.

E. Use conductor no smaller than 12 AWG for power and lighting circuits.

F. Neatly train and lace wiring inside boxes, equipment, and panelboards.

G. All conductors shall be installed in raceway.

H. Conductor sizes indicated on circuit homeruns or in schedules shall be installed over the entire length of the circuit, unless noted otherwise on the Drawings or in these Specifications.

I. Before installing raceways and pulling wire to any mechanical equipment, verify electrical characteristics with final submittal on equipment to assure proper number and AWG of conductors. (As for multiple speed motors, different motor starter arrangements, etc.).

J. Coordinate all wire sizes with lug sizes on equipment, devices, etc. Provide/install lugs as required to match wire size.

K. Where oversized conductors are called for (due to voltage drop, etc.) provide/install lugs as required to match conductors, or provide/install splice box, and splice to reduce conductor size to match lug size.

3.2 EXAMINATION

A. Verify that interior of building has been protected from weather.

B. Verify that mechanical work likely to damage wire has been completed.

3.3 PREPARATION

A. Completely and thoroughly swab raceway before installing wire.

3.4 WIRING METHODS

A. Use only building wire type (THHN/THWN for #10 and #12 and THHN/THWN-2 for #8 and larger) insulation in raceway, unless noted otherwise.

B. Wiring in vicinity of heat producing equipment: Use only XHHW insulation in raceway.

C. Conductors installed within fluorescent fixture channels shall be Type THHN or XHHW rated 90 degrees C dry. Conductors for all other light fixtures shall have temperature ratings as required to meet the UL listing of the fixture; however, in no case shall the temperature rating be less than 90 degrees Centigrade. Remove incorrect insulation types in new work.

3.5 INTERFACE WITH OTHER PRODUCTS

A. Identify wire and cable under provisions of Section 26 05 53 Identification for Electrical Systems.

B. Identify each conductor with its circuit number or other designation indicated on Drawings.

C. Identify neutrals with its associated circuit number(s).

3.6 FIELD QUALITY CONTROL

A. Perform field inspection and testing under provisions of the General Requirements of the Contract Documents and Section 26 08 13 Tests and Performance Verification.

B. Inspect wire for physical damage and proper connection.

C. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.

D. Verify continuity of each branch circuit conductor.

3.7 VERTICAL RISERS

A. Provide vertical cable riser supports per NEC 300.19. Cable supports shall be O-Z/Gedney Type "S" or equal. These shall be located in accessible pullboxes of adequate size. Provide for adequate structural connection of cable supports to pullbox, which will transfer cable weight to building.

3.8 PULLING

A. No wire shall be pulled until the conduit system is complete from pull point to pull point and major equipment terminating conduits have been fixed in position.

B. Mechanical pulling devices shall not be used on conductors sized #8 and smaller. Pulling means which might damage the raceway shall not be used.

C. Use only powdered soapstone or other pulling lubricant acceptable to the Architect/Engineer. Compound or lubricant shall not cause the conductor or insulation to deteriorate.

D. All conductors to be installed in a common raceway shall be pulled together. The manufacturer's recommended pulling tensions shall not be exceeded.

E. Bending radius of insulated wire or cable shall not be less than the minimum recommended by the manufacturer.

F. Where communications type conductors are installed, special requirements shall apply as outlined under that specific system detail specifications.

3.9 CONTROL AND SIGNAL CIRCUITS

A. For control and signal circuits above 50 VAC, conductors shall be #14 AWG minimum size, Type XHHW or THWN-THHN as permitted by NFPA 70, within voltage drop limits, increased to #12 AWG as necessary for proper operation.

B. For control and signal circuits 50 VAC and below, conductors, at the Contractor's option, may be #16 AWG, 300 volt rated, PVC insulated, except where specifically noted otherwise in the Contract Documents.

C. Conductor insulation for fire alarm systems shall be as accepted by Code Inspection Authority only. Wire acceptance by the Architect/Engineer shall not supersede this final acceptance for conditions of this specific project.

D. Install circuit conductors in conduit.

E. Circuit conductors to be stranded.

3.10 COLOR CODING

A. All power feeders and branch circuits regardless of size shall be wired with color-coded wire

with the same color used for a system throughout the building.

B. Unless otherwise accepted or required by Architect/Engineer to match existing, color-code shall be as follows:
Neutrals: 120/208V system white; 277/480V system natural grey Ground Wire: green, bare
120/208V: Phase A black, Phase B red, Phase C blue 277/480V: Phase A brown, Phase B orange, Phase C yellow.

C. All switchlegs, other voltage system wiring, control and interlock wiring shall be color-coded other than those above.

3.11 TAPS/SPLICES/CONNECTORS/TERMINATIONS

A. Clean conductor surfaces before installing lugs and connectors.

B. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.

C. Power and lighting conductors shall be continuous and unspliced where located within conduit. Splices shall occur within troughs, wireways, outlet boxes, or equipment enclosures where sufficient additional room is provided for all splices. No splices shall be made in in-ground pull boxes (without written acceptance of engineer).

D. Splices in lighting and power outlet boxes, wireway, and troughs shall be kept to a minimum. Pull conductors through to equipment, terminal cabinets, and devices.

E. No splices shall be made in junction box, and outlet boxes (wire No. 8 and larger) without written acceptance of Engineer.

F. No splices shall be made in communications outlet boxes, pull boxes or wireways (i.e., fire alarm, computer, telephone, intercom, sound system, etc.) without written acceptance of Engineer. Pull cables through to equipment cabinets, terminal cabinets and devices.

G. Allow adequate conductor lengths in all junction boxes, pull boxes and terminal cabinets. All termination of conductors in which conductor is in tension will be rejected and shall be replaced with conductors of adequate length. This requirement shall include the Contractor to provide sleeve type vertical cable supports in vertical raceway installations, provided in pullboxes at proper vertical spacings.

H. A calibrated torque wrench shall be used for all bolt tightening.

I. Interior Locations:

1. All (non-electronic systems) copper taps and splices in No. 8 or smaller shall be fastened together by means of "spring type" connectors. All taps and splices in wire larger than No. 8 shall be made with compression type connectors and taped to provide insulation equal to wire.

J. Exterior Locations:

1. Make splices, taps and terminations above grade in splice or termination cabinets. Do not splice any cable in ground or below finished grade.

2. All taps and splices shall be made with compression type connectors and covered with Raychem heavywall cable sleeves (type CRSM-CT, WCSM or MCK) with type "S" sealant coating with sleeve kits as per manufacturer's installation instructions or be terminated/connected to terminal strips in above grade terminal boxes suitable for use.

3. Provide and install above grade termination cabinets sized to meet applicable codes and standards, where required for splicing.

END OF SECTION

SECTION 26 0526

GROUNDING AND BONDING

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. Equipment grounding conductors.

2. Bonding.

B. Provide all labor, materials, and equipment necessary to properly install a grounding system conductor in all new branch wiring and feeder installations, which shall be in full compliance with all applicable codes as accepted by the Authorities Having Jurisdiction. The secondary distribution system shall include a grounding conductor in all raceways in addition to the return path of the metallic conduit.

C. In general, all electrical equipment (metallic conduit, motor frames, panelboards, etc.) shall be bonded together with a green insulated or bare copper system grounding conductor in accordance with specific rules of NEC 250, and state codes. Bonding conductor through the raceway system shall be continuous from main switch ground bus to panel ground bar of each panelboard, and from panel grounding bar of each panelboard to branch circuit equipment and devices.

D. All raceways shall have an insulated copper system ground conductor throughout the entire length of circuit installed within conduit in strict accordance with NEC. Grounding conductor shall be included in total conduit fill determining conduit sizes, even though not included or shown on drawings. Grounding conductors that run with feeders in PVC conduit outside of building(s) shall be bare only.

E. Provide and install all grounding and bonding as required by the National Electrical Code (NEC) including but not limited to NEC 250.

1.3 REFERENCES

A. ANSI/NFPA 70 National Electrical Code

B. NFPA 780 Standard for the Installation of Lightning Protection Systems

C. UL 467 Grounding and Bonding Equipment

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

1.5 SUBMITTALS

A. Submit catalog cut sheets/product data on:

1. Mechanical connectors.

B. Product data shall prove compliance with specifications, National Electrical Code, manufacturers' specifications, and written installation data.

PART 2- PRODUCTS

2.1 MECHANICAL CONNECTORS

A. All grounding connectors shall be UL listed for application.

B. Connectors and devices used in the grounding systems shall be fabricated of copper or bronze materials, and properly applied for their intended use. Specified items of designated manufacturers indicate required criteria and equal products may be provided if approved. All connectors and devices shall be compatible with the surfaces being bonded and shall not cause galvanic corrosion by dissimilar metals. Materials in items not listed herein shall be of equal quality to the following specified items:

1. Lugs: Substantial construction, of cast copper or cast bronze, with "ground" (micro-flat) surfaces, twin clamp, two-hole tongue, equal to Burndy QQA Series or T&B equal. Lightweight and "competitive" devices shall be rejected.

2. Grounding and Bonding Bushings: Malleable iron, Thomas and Betts (T&B), or equal.

3. Grounding Screw and Pigtail: Raco No. 983 or equal.

C. Mechanical lugs or wire terminals shall be used to bond ground wires together or to junction boxes and panel cabinets and shall be manufactured by Anderson, Buchanan, Thomas and Betts Co., or Burndy.

2.2 WIRE

A. Material: Stranded copper.

B. Size: Size to meet NFPA 70 requirements as a minimum, increase size if called for on drawings, in these specifications, or as required for voltage drop.

C. Insulated THWN (or bare as noted elsewhere).

PART 3- EXECUTION

3.1 GENERAL

A. Install products in accordance with manufacturer's instructions.

B. Install grounding conductor, bonding conductors, etc. with all required accessories.

C. Grounding shall meet (or exceed as required to meet these specifications) all the requirements of the NEC, the NFPA, and applicable standards of IEEE.

D. Where there is a conflict between these specifications and the above applicable codes/standards, or between this section of these specifications and other sections, then the

most stringent or excessive requirement shall govern. Where there is an omission of a code/standard requirement in these specifications, then the code/standard requirements shall be complied with.

E. Requirement in these specifications to comply with a specific code/standard article, etc. is not to be construed as deleting of requirements of other applicable codes/standards and their articles, etc.

3.2 EQUIPMENT GROUNDING CONDUCTOR

A. Grounding conductors shall be provided with every circuit to meet (or exceed as required to meet these specifications and/or drawings) the requirements of NEC 250.

B. At every voltage level, new portions of the electrical power distribution system shall be grounded with a dedicated copper conductor, which extends from termination back to power source in supply panelboard.

C. Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

D. Except as otherwise indicated, each feeder raceway on the load side of the service entrance shall contain a ground conductor sized as indicated and where not shown shall be sized to meet (or exceed as required to meet these specifications and/or drawings) the requirements of NEC 250. Conductor shall be connected to the equipment grounding bus in switchboards and panelboards, to the grounding bus in all motor control centers, and as specified, to lighting fixtures, motors and other types of equipment and outlets. The ground shall be in addition to the metallic raceway and shall be properly connected thereto, using a lug device located within each item enclosure at the point of electric power connections to permit convenient inspection.

E. Provide green insulated ground wire for all grounding type receptacles and for equipment of all voltages. In addition to grounding strap connection to metallic outlet boxes, a supplemental grounding wire and screw equal to Raco No. 983 shall be provided to connect receptacle ground terminal to the box.

F. All plugstrips and metallic surface raceway shall contain a green insulation ground conductor from supply panel ground bus connected to grounding screw on each receptacle in strip and to strip channel. Conductor shall be continuous.

G. All motors, all heating coil assemblies, and all building equipment requiring flexible connections shall have a green grounding conductor properly connected to the frames and extending continuously inside conduit with circuit conductors to the supply source bus with accepted connectors regardless of conduit size or type. This shall include gym equipment, and all other "Equipment By Owner" to which an electric conduit is provided under this Division.

3.3 MISCELLANEOUS GROUNDING CONNECTIONS

A. Provide bonding to meet regulatory requirements.

B. Grounding conductors shall: be installed to permit the shortest and most direct path from equipment to ground; be installed in conduit; be bonded to conduit at both ends when conduit is metal; have connections accessible for inspection; and made with accepted solderless connectors brazed (or bolted) to the equipment or to be grounded; in NO case be a current carrying conductor; have a green jacket unless it is bare copper; be run in conduit with power and branch circuit conductors.

C. All surfaces to which grounding connections are made shall be thoroughly cleaned to maximum

conductive condition immediately before connections are made thereto. Metal rustproofing shall be removed at grounding contact surfaces, for 0 ohms by digital Vm. Exposed bare metal at the termination point shall be painted.

D. Install ground bushings on all metal conduits entering enclosures where the continuity of grounding is broken between the conduit and enclosure (i.e. metal conduit stub-up into a motor control center enclosure or at ground bus bar). Provide an appropriately sized bond jumper from the ground bushing to the respective equipment ground bus or ground bus bar.

E. Install ground bushings on all metal conduits where the continuity of grounding is broken between the conduit and the electrical distribution system (i.e. metal conduit stub-up from wall outlet box to ceiling space. Provide an appropriately sized bond jumper from the ground bushing to the respective equipment ground bus or ground bus bar.

F. Grounding provisions shall include double locknuts on all heavywall conduits.

G. Install grounding bus in all existing panelboards of remodeled areas, for connection of new grounding conductors, connected to an accepted ground point.

3.4 TESTING AND REPORTS

A. Raceway Continuity: Metallic raceway system as a component of the facilities ground system shall be tested for electrical continuity. Resistance to ground throughout the system shall not exceed specified limits.

3.5 FIELD QUALITY CONTROL

A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

END OF SECTION

SECTION 26 0529

HANGERS AND SUPPORTS

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. Conduit and equipment supports.

2. Anchors and fasteners.

B. Furnish and install all supports, hangers and inserts required to mount fixtures, conduit, cables, pullboxes and other equipment furnished under this Division.

1.3 REFERENCES

A. NECA National Electrical Contractors Association

B. ANSI/NFPA 70 National Electrical Code

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

PART 2- PRODUCTS

2.1 PRODUCT REQUIREMENTS

A. Materials and Finishes: Provide corrosion resistance.

B. Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Provide anchors, fasteners, and supports in accordance with NECA National Electrical Installation Standards.

C. Do not fasten supports to pipes, ducts, mechanical equipment or conduit.

D. Do not use spring steel clips and clamps.

E. Do not use gas or powder-actuated anchors.

F. Obtain permission from A/E before drilling or cutting structural members.

G. Fabricate supports from structural steel or steel channel. Rigidly weld members or use hexagon head bolts to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.

H. Install surface-mounted cabinets and panelboards with minimum of four anchors.

I. In wet and damp locations use steel channel supports to stand cabinets and panelboards 1” off wall.

J. Use sheet metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.

K. All items shall be supported from the structural portion of the building, except standard ceiling-mounted lighting fixtures, and small devices may be supported from ceiling system where permitted by Ceiling Contractor, however, no sagging of the ceiling will be permitted. Wire shall not be used as a support. Boxes and conduit shall not be supported or fastened to ceiling suspension wires or to ceiling channels.

L. This Contractor shall lay out and install his work in advance of the laying of floors or walls, and shall furnish and install all sleeves that may be required for openings through floors, wall, etc. Where plans call for conduit to be run exposed, this Contractor shall furnish and install all inserts and clamps for the supporting of conduit. If this Contractor does not properly install all sleeves and inserts required, he will be required to do the necessary cutting and patching later at his own expense to the satisfaction of the Architect.

M. All conduits shall be securely fastened in place per NEC. Hangers, supports or fastenings shall be provided at each elbow and at the end of each straight run terminating at a box or cabinet. The use of perforated iron for supporting conduits will not be permitted. The required strength of the supporting equipment and size and type of anchors shall be based on the combined weight of conduit, hanger and cables. Horizontal and vertical conduit runs may be supported by one- hole malleable straps, clamp-backs, or other accepted devices with suitable bolts, expansion shields (where needed) or beam-clamps for mounting to building structure or special brackets.

N. Where two or more conduits are run parallel or in a similar direction, they shall be grouped together and supported by means of Kindorf type trapeze hanger system (racking) consisting of concrete inserts, threaded solid rods, washers, nuts and galvanized "L" angle iron, or Unistrut cross members. These conduits shall be individually fastened to the cross member of every other trapeze hanger with galvanized cast one hole straps, clamp backs, bolted with proper size cadmium machine bolts, washers and nuts. If adjustable trapeze hangers are used to support groups of parallel conduits, U-bolt type clamps shall be used at the end of a conduit run and at each elbow. J-bolts, or accepted clamps, shall be installed on each third intermediate trapeze hanger to fasten each conduit.

O. Hanger assemblies shall be protected after fabrication by galvanizing. Hangers for PVC coated conduit shall be PVC coated galvanized conduit or stainless steel. All hangers exterior to the building shall be stainless steel.

P. On concrete or brick construction, insert anchors shall be installed with round head machine screws. In wood construction, round head screws shall be used. An electric or hand drill shall be used for drilling holes for all inserts in brick, concrete or similar construction. In brick, inserts shall be near center of brick, not near edge or in joint. Where steel members occur, same shall

be drilled and tapped, and round head machine screws shall be used. All screws, bolts, washers, etc., used for supporting conduit or outlets shall be fabricated from rust-resisting metal, or accepted substitution. No tapcons permitted whatsoever. Fasteners similar to tapcon self tapping power driven type are not acceptable. Plastic and metal anchors are acceptable. All hardware exterior to the building shall be stainless steel.

Q. Anchors that do not readily permit removal/replacement of the attached item are not acceptable. Unacceptable anchors include: pin grips, drive pin anchors, split drive anchors, spike anchors, and similar.

R. Conduit supporting devices such as spring type conduit clips manufactured by Caddy Corporation may not be used.

S. Threaded rod hangers shall be galvanized continuous thread type, minimum 3/8" diameter.

T. Concrete/insert anchors, threaded rods, or similar fasteners installed on side or bottom of prestressed beams are not acceptable.

U. Treat cut ends of support struts, support rods, conduit threads, etc. zinc rich coating or as required to prevent corrosion.

END OF SECTION

SECTION 26 0533

CONDUIT

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 requirements for electrical conduit.

B. Provide and install all equipment, labor, material, accessories, and mounting hardware for a complete and operating system for the following:

1. Rigid Metal Conduit (RMC) NEC 344
2. Rigid Metal Conduit PVC Coated (RMC-PVC Coated) NEC 344
3. Flexible Metal Conduit (FMC) NEC 348
4. Liquidtight Flexible Metal Conduit (LFMC) NEC 350
5. Electrical Metallic Tubing (EMT) NEC 358
6. Fittings and Conduit Bodies

1.3 REFERENCES

A. ANSI C80.1 Electrical Rigid Steel Conduit, Zinc Coated

B. ANSI C80.3 Electrical Metallic Tubing, Zinc Coated

C. ANSI C80.5 Electrical Rigid Aluminum Conduit

D. ANSI/NEMA FB 1 Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing and Cable

E. ANSI/NFPA 70 National Electrical Code

F. NECA Standard Practice of Good Workmanship in Electrical Contracting

G. NEMA RN 1 Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit

H. NEMA TC 2 Electrical Polyvinyl Chloride (PVC) Conduit (EPC 40, EPC 80)

I. NEMA TC 3 Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

1.5 DESIGN REQUIREMENTS

A. Conduit Size: ANSI/NFPA 70. (See Drawings and this and other sections of these Specifications for additional requirements).

B. Raceways and conduits shall begin at an acceptable enclosure and terminate only in another such enclosure except conduit/raceway stub-outs.

C. A raceway shall be provided for all electrical power and lighting, and electrical systems unless specifically specified otherwise.

1.6 SUBMITTALS

A. Submit catalog cut sheet showing brand of conduit to be used and showing that conduit is UL listed and labeled, and manufactured in the United States.

B. Submit catalog cut sheet on all types of conduit bodies and fittings.

C. Product data shall be submitted for acceptance on:

1. Conduits.

2. Conduit straps, hangers and fittings.

3. Coatings.

4. Strap wrenches that will be utilized to minimize damage to conduit finishes.

D. Submit UL listed fire and smoke stopping assemblies for each applicable application.

E. Product data shall prove compliance with Specifications, National Electrical Code, National Board of Fire Underwriters, manufacturers' specifications and written installation data.

1.7 PROJECT RECORD DOCUMENTS

A. Submit record documents to accurately record actual routing of conduits larger than 1.25".

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver, properly store and protect products at the site.

B. Accept conduit on site. Inspect for damage.

C. Protect conduit from sun, rain, corrosion and entrance of debris by storing above grade. Provide appropriate covering.

1.9 PROJECT CONDITIONS

A. Verify that field measurements are as shown on Drawings.

B. Verify routing and termination locations of conduit prior to rough-in.

C. Conduit routing is shown on Drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

PART 2 – PRODUCTS

2.1 GENERAL

A. All conduits shall bear UL label or seal and shall be manufactured in the United States.

B. Conduit systems and all related fittings, boxes, supports, and hangers must meet all the requirements of national, state, and other federal codes where applicable.

2.2 MINIMUM TRADE SIZE

A. Homeruns: 3/4” C.

B. Branches Aboveground: 1/2” C.

2.3 RIGID METAL CONDUIT

A. Comply with:

1. ANSI C80.1.

2. UL 6.

3. NEC 344.

B. Conduit material:

1. Zinc coated or hot dipped galvanized steel.

C. Fittings:

1. Threaded.

2. Insulated bushings shall be used on all rigid steel conduits terminating in panels, boxes, wire gutters, or cabinets, and shall be impact resistant plastic molded in an irregular shape at the top to provide smooth insulating surface at top and inner edge. Material in these bushings must not melt or support flame.

3. Zinc plated or hot dipped galvanized malleable iron or steel.

D. Conduit Bodies:

1. Comply with ANSI/NEMA FB 1.

2. Threaded hubs.

3. Zinc plated or hot-dipped galvanized malleable iron.

2.4 RIGID METAL CONDUIT PVC COATED

A. Comply with:

1. UL 6.

2. ANSI C80.1.

3. NEC 344.

4. NEMA RN1.

B. Conduit material: Hot-dipped galvanized rigid steel with external PVC coating, 40 mil thick.

C. Fittings:

1. Threaded.

2. Insulated bushings on terminations.

3. Zinc plated or hot-dipped galvanized malleable iron or steel with external PVC coating, 40 mil thick.

D. Conduit Bodies:

1. Comply With:

a) ANSI/NEMA FB 1.

b) Threaded hubs.

2. Zinc plated or hot-dipped galvanized malleable iron with external PVC coating 40 mil thick.

2.5 FLEXIBLE METAL CONDUIT

A. Comply With:

1. NEC 348.

2. ANSI/UL 1.

B. Conduit Material:

1. Steel, interlocked.

C. Fittings:

1. ANSI/NEMA FB 1.

2. ANSI/UL 514B.

3. Malleable iron, zinc plated.

4. Threaded rigid and IMC conduit to flexible conduit coupling.

5. Direct flexible conduit bearing set screw type not acceptable.

2.6 LIQUID-TIGHT FLEXIBLE METAL CONDUIT

A. Comply with:

1. NEC 350.

2. ANSI/UL 360.

B. Conduit material:

1. Flexible hot-dipped galvanized steel core, interlocked.

2. Continuous copper ground built into core up to 1-1/4” size.

3. Extruded polyvinyl gray jacket.

C. Fittings:

1. Threaded for IMC/rigid conduit connections.

2. Accepted for hazardous locations where so installed.

3. Provide sealing washer in wet/damp locations.

4. Compression type.

5. ANSI/NEMA FB 1.

6. ANSI/UL 514B.

7. Zinc plated malleable iron or steel.

2.7 ELECTRICAL METALLIC TUBING

A. Comply with:

1. UL 797.

2. ANSI C80.3.

3. NEC 358.

4. ANSI/UL 797.

B. Conduit material: Galvanized steel tubing.

C. Fittings:

1. ANSI/NEMA FB 1.

2. Set screw.

3. Zinc plated malleable iron or steel.

4. Concrete tight.

2.8 COLD GALVANIZING COMPOUND

A. Coating shall be a coating that provides a dry film with a 93% pure zinc content.

B. Coating shall be applied in two in two light coats a few minutes apart and an additional two light coats after the initial coat has dried.

C. Basis of Design:

1. Rust-Oleum® Stops Rust® Cold Galvanizing Spray

PART 3 – EXECUTION

3.1 LOCATION REQUIREMENTS

A. In Slab Above or on Grade:

1. Use coated rigid steel conduit, coated intermediate metal conduit (if accepted) or rigid non-metallic conduit.

2. Coating of metallic conduit to be black asphaltic or PVC.

B. Penetration of Slab:

1. Exposed Location:

a) Where penetrating a floor in an exposed location from underground or in slab, a black mastic coated or PVC coated galvanized rigid steel conduit shall be used.

C. Outdoor Location:

1. Above Grade:

a) Where penetrating the finished grade, black mastic coated or PVC coated galvanized rigid steel conduit shall be used.

b) In general all exterior conduit runs shall be rigid conduit with PVC coating and threaded connectors as specified elsewhere.

2. Roofs:

a) Conduit is not to be installed on roofs.

D. Interior Dry Locations:

1. Concealed: Use rigid metal conduit or electrical metallic tubing. Rigid non-metallic conduit may be used inside block walls up to first outlet to a maximum of 40” AFF except where prohibited by the NEC (Places of Assembly, etc.).

2. Exposed: Use rigid metal conduit or electrical metallic tubing. EMT may only be used where not subject to damage, which is interpreted by this specification to be above 90” AFF.

3. Concealed or Exposed Flexible Conduit:

a) Concealed flexible steel conduit or seal tight flexible steel conduit in lengths not longer than 6’ in length with a ground conductor installed in the conduit or an equipment ground conductor firmly attached to the terminating fitting at the extreme end of the flex. Exposed seal tight flexible steel conduit shall not exceed 2’ in length, unless written authorization by A/E for specific conditions is granted.

3.2 ADDITIONAL REQUIREMENTS FOR RIGID STEEL CONDUIT

A. Rigid steel conduit shall be cut and threaded with tools accepted for the purpose and by qualified personnel.

1. Accepted pipe vise.

2. Roller/bade type cutter or band saw.

3. Reamer capable of completely removing all ridges or burrs left by the cutter. Reaming with pliers is not acceptable.

B. Hangers shall be installed 8’ apart.

C. Conduits stubbed through floor slabs, above grade and not contained inside walls, shall be rigid galvanized metallic conduit.

D. Conduit threads and scratches in galvanizing shall be treated with not less than two coats of zinc rich coating.

3.3 ADDITIONAL REQUIREMENTS FOR EMT

A. Electrical metallic tubing (thin wall) may be installed inside buildings above ground floor where not subject to mechanical injury.

B. All cuts shall be reamed smooth and free of sharp and abrasive areas by use of an accepted reamer.

3.4 ADDITIONAL REQUIREMENTS FOR FLEXIBLE STEEL CONDUIT AND SEAL-TITE FLEXIBLE STEEL CONDUIT

A. Shall be properly grounded.

B. Shall be installed with accepted fittings.

C. Flexible steel conduit shall only be utilized for concealed installations. Exposed installations requiring flexibility shall be utilize liquid tight flexible steel conduit.

3.5 SUPPORTS

A. Arrange supports to prevent misalignment during wiring installation.

B. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.

C. Group related conduits; support using conduit rack. Construct rack using steel channel; (minimum 24", increase distance as required) provide space on each for 25 percent additional conduits.

D. Fasten conduit supports to building structure and surfaces under provisions of Section 26 05 29 Hangers and Supports.

E. Do not support conduit with wire, metal banding material, or perforated pipe straps. Remove wire used for temporary supports

F. Do not attach conduit to ceiling support wires.

G. Conduits shall not be supported from ceiling grid supports, plumbing pipes, duct systems, heating or air conditioning pipes, or other building systems.

H. Non-bolted conduit clamps, as manufactured Caddy Corp. are not accepted. Supporting conduit and boxes with wire is not accepted. All raceways except those from surface-mounted switches, outlet boxes or panels shall be supported with clamp fasteners with toggle bolt on hollow walls, and with lead expansion shields on masonry.

3.6 GROUNDING

A. All raceways shall have a copper system ground conductor throughout the entire length of circuit installed within conduit in strict accordance with NEC codes.

B. Grounding conductor shall be included in total conduit fill determining conduit sizes, even though not included or shown on drawings.

C. Grounding conductors run with exterior/ underground feeders shall be bare only.

D. Grounding conductors run with feeders shall be bonded to portions of conduit that are metal by accepted ground bushings.

E. See other sections of these specifications for additional requirements.

3.7 FIRE AND SMOKE STOPPING

A. Contractor is to provide fire stopping and/or smoke stopping for all penetrations of existing (or new if applicable) fire or smoke barrier walls, chases, floors, etc. as required to maintain existing rating of floor, wall, chase, etc.

B. Install conduit to preserve fire resistance rating of partitions and other elements.

C. Install fireproofing material to maintain existing rating of floor, beams, etc. damaged or removed by renovation.

D. Fire and smoke stopping material: A two-part silicone foam or a one-part putty, UL classified and FM accepted with flame spread of 0 and smoke development not to exceed 50 in compliance with ASTM E84. Material shall be suitable for penetration seals through fire-rated floors and walls when tested in compliance with ASTM E119. Material shall not melt or soften at high temperatures, shall be suitable for direct outdoor and ultraviolet exposures, shall cure to give a tight compression fit, and shall not produce toxic fumes. Material, when heated, shall expand to fill and hold penetration closed where burn out of cable insulation or ATC tubing occurs.

3.8 VERTICAL RACEWAYS

A. Cables in vertical raceways shall be supported per NEC 300.19. Provide and install supporting devices for cables, including any necessary accessible pullbox as required regardless if shown on drawings or not. Provide and install access panels as required. Coordinate location of pull box and access panel with architect prior to installation. This includes empty raceways for future use.

3.9 GENERAL

A. Install conduit in accordance with NECA Standard Practice of Good Workmanship in Electrical Contracting. Contractor shall layout all work prior to rough-in.

B. Utilize strap wrenches to tighten conduits and fittings so as to prevent damage to galvanized finishes.

C. Arrange conduit to maintain headroom and present neat appearance.

D. Route conduit installed above accessible ceilings or exposed to view parallel or perpendicular to walls. Do not run from point to point.

E. Maintain adequate clearance between conduit and piping.

F. Maintain 12” clearance between conduit and surfaces with temperatures exceeding 104 degrees F (40 degrees C).

G. Cut conduit square using saw or pipe cutter; de-burr cut ends.

H. Bring conduit to shoulder of fittings; fasten securely.

I. Use conduit hubs to fasten conduit to sheet metal boxes in damp and wet locations and to cast boxes.

J. Install no more than equivalent of three 90 degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use factory elbows for bends in metal conduit larger than 2” size.

K. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.

L. Provide and install pullboxes, junction boxes, fire barrier at fire rated walls etc., as required by NEC 300, whether shown on Drawings or not.

M. Provide continuous fiber polyline 1000 lb. minimum tensile strength pull string in each empty conduit except sleeves and nipples. This includes all raceways which do not have conductors furnished under this Division of the Specifications. Pullcord must be fastened to prevent accidental removal. A phenolic or brass nameplate shall be attached to each end indicating the location of both ends of conduit as follows: THIS END = "LOCATION," OTHER END = "LOCATION."

N. Ground and bond conduit under provisions of Section 26 05 26 Grounding and Bonding.

O. Identify conduit under provisions of Section 26 05 53 Identification for Electrical Systems.

P. Install all conduits concealed from view unless specifically shown otherwise on drawings

Q. Rigid steel box connections shall be made with double locknuts and bushings.

R. All raceways shall be kept clear of plumbing fixtures to facilitate future repair or replacement of said fixtures without disturbing wiring. Except where it is necessary for control purposes, all raceways shall be kept away from items producing heat.

S. All raceways shall be run from outlet to outlet as shown on the drawings, unless permission is granted to alter arrangement shown. If permission is granted arrangement shall be marked on field set of drawings as previously specified.

T. All connections to motors or other vibrating equipment including dry type transformers or at other locations where required shall be made with not less than 12” of liquid tight flexible steel conduit. Use angle connectors wherever necessary to relieve angle strain on flex conduit.

U. All raceways shall be run in neat and workmanlike manner and shall be properly in accordance with latest edition of NEC with accepted conduit clamps, hanger rods and structural fasteners.

V. All raceway runs, whether terminated in boxes or not, shall be capped during the course of construction and until wires are pulled in, and covers are in place. No conductors shall be pulled into raceways until construction work which might damage the raceways has been completed.

W. Electrical raceways shall be supported independently of all other systems and supports, and

shall in every case avoid proximity to other systems which might cause confusion with such systems or might provide a chance of electrolytic actions, contact with live parts or excessive induced heat.

END OF SECTION

SECTION 26 0534

OUTLET BOXES

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 wall and ceiling outlet boxes (and/or small junction/pullboxes).

B. Provide and install all outlet boxes (flush or surface) complete with all accessories as required to facilitate installation of electrical system and as required by the NEC.

1.3 REFERENCES

A. ANSI/NEMA FB 1 Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable

B. ANSI/NEMA OS 1 Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports

C. ANSI/NFPA 70 National Electrical Code

D. NEMA 250 Enclosures for Electrical Equipment (1000 Volts Maximum)

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

1.5 SUBMITTALS

A. Submit catalog cut sheets/product data on:

1. Surface cast boxes.

B. For pullboxes and junction boxes not covered in Section 26 05 35 Pull and Junction Boxes. Submit product data showing dimensions, covers, and construction.

1.6 PROJECT CONDITIONS

A. Verify field measurements are as shown on Drawings.

B. Verify locations of outlets in offices and work areas prior to rough-in.

C. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.

PART 2 – PRODUCTS

2.1 GENERAL

A. All boxes and fittings shall be labeled by Underwriters Laboratories.

B. Provide box accessories as required for each installation, including mounting brackets, wallboard hangers, extension rings, outlet boxes, and corrosion-resistant knockout closures compatible with outlet boxes being used and meeting requirements of individual wiring situations.

C. All boxes shall be of the size and shape required by NFPA 70 for their respective locations.

D. Boxes shall be of such form and dimensions as to be adapted to the specific use and location, type of device or fixtures to be used, and number and size of conductors and arrangement, size and number of conduits connecting thereto.

E. Handy boxes shall not be used.

F. Outlet boxes to be one-piece.

G. 4" x 4" boxes and 4 11/16" x 4 11/16" boxes used as junction boxes shall be one piece.

2.2 SHEET METAL OUTLET BOXES: ANSI/NEMA OS 1, GALVANIZED STEEL

A. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include 1/2” male fixture studs where required.

B. Concrete Ceiling Boxes: Concrete type.

C. Interior flush outlet boxes shall be galvanized steel constructed with stamped knockouts in back and sides, and threaded holes with screws for securing box coverplates or wiring devices. T&B, Steel City, Raco or accepted substitution.

D. Ceiling outlet boxes shall be 4" octagonal or 4" square X 1 1/2" deep or larger as required for number and size of conductors and arrangement, size and number of conduits terminating at them.

E. Switch, wall receptacle, telephone and other recessed wall outlet boxes in drywall shall be 4" square X 1 1/2" deep. For recessing in exposed masonry, provide one piece 4" square x 1-1/2" deep wall boxes with appropriate 4" square cut tile wall covers Steel City series #52-C-49/52-C- 52 or accepted substitution. For recessing in furred-out block walls, provide 4" square box with required extension for block depth and required extension for drywall depth.

F. Sheet metal boxes shall be stainless steel fully weatherproof and watertight where installed outside.

2.3 CAST BOXES NEMA FB 1:

A. Interior surface outlet boxes and conduit bodies installed from 0" AFF to 90" AFF (including fire alarm device backbox) shall be the heavy cast aluminum or iron with external threaded hubs for power devices and threaded parts for low voltage devices; Appleton, Crouse Hinds or accepted substitution. Trim rings shall also be of one-piece construction.

B. Weatherproof outlet boxes shall be constructed of corrosion-resistant cast metal suited to each application with threaded conduit hubs, cast metal faceplate with spring-hinged waterproof cap

suitably configured, gasket, and corrosion-proof fasteners.

C. Boxes to be Type FD unless otherwise noted on drawings.

D. Freestanding cast boxes are to be type FSY (with flange). Other cast zinc boxes are not acceptable.

PART 3 – EXECUTION

3.1 GENERAL

A. Install electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.

B. Install electrical boxes to maintain headroom and to present neat mechanical appearance.

C. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6” from ceiling access panel or from removable recessed luminaire.

D. Install boxes to preserve fire resistance rating of partitions and other elements.

E. Align adjacent wall-mounted outlet boxes for switches, thermostats, and similar devices with each other.

F. Use flush mounting outlet boxes in finished areas.

G. Do not install flush mounting boxes back-to-back in walls; provide minimum 6” separation. Provide minimum 24” separation in acoustic rated walls.

H. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.

I. Use stamped steel bridges to fasten flush mounting outlet box between studs.

J. Install flush mounting box without damaging wall insulation or reducing its effectiveness.

K. Support all outlet boxes from structure with minimum of one 3/8" all-thread rod hangers. Boxes larger than 25 square inches shall be supported with two all-thread rod hangers, minimum.

L. Do not fasten boxes to ceiling support wires.

M. Support boxes independently of conduit.

N. Use gang box where more than one device is mounted together. Do not use sectional box.

O. Use gang box with plaster ring for single device outlets.

P. Use cast outlet box in exterior locations and wet locations.

Q. Comply with applicable portions of the NECA National Electrical Installation Standards.

R. Install outlets in the locations shown on the Drawings; however prior to rough-in, the Owner shall have the right to make slight changes in locations to reflect room furniture layouts.

S. The Contractor shall coordinate his work with that of the General Contractor so that each electrical box is the type suitable for the wall or ceiling construction provided and suitable

fireproofing is inbuilt into fire rated walls.

T. The Contractor shall relocate electrical boxes as required so that once installed, electrical devices will be symmetrically located with respect to the room layout.

U. All boxes shall be installed in a flush rigid manner with box lines at perpendicular and parallel angles to finished surfaces. Boxes shall be supported by appropriate hardware selected for the type of surface from which the box shall be supported. For example, provide metal screws for metal, wood screws for wood, and expansion devices for masonry or concrete.

V. For locations exposed to weather or moisture (interior or exterior), provide weatherproof boxes and accessories.

W. As a minimum, provide pull boxes in all raceways over 150’ long. The pull box shall be located near the midpoint of the raceway length.

X. Provide knockout closures to cap unused knockout holes where blanks have been removed, and plugs for unused threaded hubs.

Y. Provide conduit locknuts and bushings of the type and size to suit each respective use and installation.

Z. Boxes and conduit bodies shall be located so that all electrical wiring is accessible.

AA. Avoid using round boxes where conduit must enter box through side of box, which would result in a difficult and insecure connection with a locknut or bushing on the rounded surface.

BB. All flush outlets shall be mounted so that covers and plates will finish flush with finished surfaces without the use of shims, mats or other devices not submitted or accepted for the purpose. Add- a-Depth rings or switch box extension rings (Steel City #SBEX) are not acceptable. Plates shall not support wiring devices. Gang switches with common plate where two or more are indicated in the same location. Wall-mounted devices of different systems (switches, thermostats, etc.) shall be coordinated for symmetry when located near each other on the same wall. Outlets on each side of walls shall have separate boxes. Through-wall type boxes shall not be permitted. Back-to-back mounting shall not be permitted. Trim rings shall be extended to within 1/8" of finish wall surface.

CC. Outlet boxes mounted in metal stud walls are to be supported to studs with two screws inside of outlet box to a horizontal stud brace between vertical studs, or one side of outlet box supported to stud with opposite side mounted to section of stud or device to prevent movement of outlet box after wall is finished.

DD. All outlet boxes that do not receive devices in this contract are to have blank plates installed matching wiring device plates.

EE. Mount Height.

1. Height of wall outlets to bottom above finished floors shall be as follows, unless specifically noted otherwise, or unless otherwise required by applicable codes including ADA. Verify with the Architectural Drawings and Shop Drawings for installing:

Switches	4'-0" AFF to top
Receptacles	1'-4" AFF to bottom
Lighting Panels	6'-6" AFF to centerline of highest breaker/fuse
Phone outlets	1'-4" AFF to bottom
Intercom Call-in	4'-0" AFF to top button/handsets
Fire Alarm Pull Stations	4'-0" AFF to top

Fire Alarm Strobe Lights 80" AFF to bottom

2. Bottoms of outlets above countertops or base cabinets shall be minimum 2" above countertop or backsplash, whichever is highest. Outlets may be raised so that bottom rests on top of concrete block course, but all outlets above counters in same area shall be at same height. It is the responsibility of this Division to secure cabinet drawings and coordinate outlet locations in relation to all cabinets as shown on Architectural Drawings, prior to rough-in, regardless of height shown on Division 26 Drawings.

3. Height of wall-mounted fixtures shall be as shown on the Drawings or as required by Architectural Drawings and conditions. Fixture outlet boxes shall be equipped with fixture studs when supporting fixtures.

FF. Special Purpose Outlets.

1. Locate special purpose outlets as indicated on the drawings for the equipment served. Location and type of outlets shall be coordinated with appropriate trades involved. The securing of complete information for proper electrical roughing-in shall be included as work required under this section of specifications. Provide plug for each outlet.

GG. Outlets in Fire/Smoke and Smoke Partitions/Walls.

1. Electrical outlet boxes may be installed in vertical fire resistive assemblies classified as fire/smoke and smoke partitions without affecting the fire classification, provided such openings occur on one side only in each framing space and that openings do not exceed 16 square inches. All clearances between such outlet boxes and the gypsum board must be completely filled with joint compound or other accepted materials. The wall must be built around outlets of larger size so as not to interfere with the integrity of the wall rating.

3.2 INTERFACE WITH OTHER PRODUCTS

A. Coordinate installation of outlet box for products furnished under all Sections of these specifications.

B. Coordinate locations and sizes of required access doors with applicable sections in these specifications.

C. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.

D. Coordinate mounting heights and locations of outlets mounted above counters, benches and backsplashes.

E. Position outlet boxes to locate luminaires as shown on reflected ceiling plan.

3.3 ADJUSTING

A. Adjust flush-mounting outlets to make front flush with finished wall material.

B. Install knockout closure in unused box opening.

END OF SECTION

SECTION 26 0535

PULL AND JUNCTION BOXES

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. Provide and install pull and junction boxes as shown on drawings or as required by the NEC.

B. Provide and install pull and junction boxes wherever required for a complete and operating distribution system whether shown on drawings or not.

C. Where outlet boxes are used for pull and/or junction boxes, they shall meet the requirements of Section 26 05 34 Outlet Boxes.

1.3 REFERENCES

A. ANSI/NEMA FB 1 Fittings and Supports for Conduit and Cable Assemblies

B. ANSI/NEMA OS 1 Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports

C. ANSI/NEMA OS 2 Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports

D. ANSI/NFPA 70 National Electrical Code

E. NEMA 250 Enclosures for Electrical Equipment (1000 Volts Maximum)

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

1.5 SUBMITTALS

A. Submit actual shop drawings of all pull boxes showing:

1. Covers.

2. Dimensions - inside and out.

3. Rating of concrete or gauge of metal.

4. Manufacturer.

1.6 PROJECT RECORD DOCUMENTS

A. Accurately record actual locations and mounting heights of pull and junction boxes.

1.7 PROJECT CONDITIONS

A. Verify field measurements are as shown on Drawings.

B. Verify locations of pull and junction boxes prior to rough-in.

C. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose and to maintain required access.

PART 2 – PRODUCTS

2.1 GENERAL

A. Dimensions of pull and junction boxes shall meet dimensions shown on Drawings or dimensions required by NEC, whichever is largest.

B. Pull and junction boxes shall meet all requirements of UL and NEC.

C. Small pull boxes (i.e. 4" x 4") shall meet the requirements of these Specifications for outlet boxes as a minimum.

D. All boxes (above ground) of 100 cubic inches or more shall be constructed of 14 gauge steel with hot dip galvanized coating.

2.2 SHEET METAL BOXES

A. NEMA OS 1, galvanized steel.

B. Box to be stainless steel fully weatherproof and watertight where installed outside.

2.3 SURFACE-MOUNTED CAST METAL BOX

A. NEMA 250, Type 4; flat-flanged, surface-mounted junction box.

B. Material: Cast aluminum.

C. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

D. Provide all hubs as required for conduit connections.

PART 3- EXECUTION

3.1 GENERAL

A. Install per NEC.

B. Install electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.

C. Install electrical boxes to maintain headroom and to present neat mechanical appearance.

D. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.

E. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6” from ceiling access panel or from removable recessed luminaire.

F. Install boxes to preserve fire resistance rating of partitions and other elements.

G. Align adjacent wall-mounted boxes with each other.

H. Use flush mounting boxes in finished areas.

I. Do not install flush mounting boxes back-to-back in walls; provide minimum 6” separation. Provide minimum 24” separation in acoustic rated walls.

J. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.

K. Install flush mounting box without damaging wall insulation or reducing its effectiveness.

L. Pull and junction boxes larger than 25 square inches shall be supported with two 3/8" all-thread rod hangers minimum.

M. Do not fasten boxes to ceiling support wires.

N. Support boxes independently of conduit.

O. Large Pull Boxes:

1. Boxes larger than 100 cubic inches in volume or 12” in any dimension.:

a) Interior dry locations per NEC with screw covers.

b) Other locations use hinged enclosure under provisions of Section 26 27 16 Cabinets and Enclosures.

P. Outdoor Locations: All boxes installed outdoors to be NEMA 4, fully weatherproof and watertight.

3.2 INTERFACE WITH OTHER PRODUCTS

A. Coordinate locations and sizes of required access doors with applicable sections in these Specifications.

B. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.

3.3 ADJUSTING

A. Install knockout closure in unused box opening.

END OF SECTION

SECTION 26 0537

SURFACE RACEWAYS

PART 1 - GENERAL

1.1 DESCRIPTION OF SYSTEM

A. Provide and install all equipment, labor, material, accessories, and mounting hardware for a complete and operating system for the following:

1. Surface metal raceways.

2. Wireways.

1.2 REFERENCES

A. NECA (National Electrical Co Association) Standard of Installation.

B. NEMA WD 6 - Wiring Device Configurations.

1.3 SUBMITTALS

A. Submit under provisions of the General Requirements of the Contract Documents and Section 26 05 07 Submittals.

B. Submit Product Data: Provide dimensions, knockout sizes and locations, materials, fabrication details, finishes, and accessories.

C. Submit Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with NECA Standard of Installation.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this Section with minimum five years experience.

1.6 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

PART 2 – PRODUCTS

2.1 SURFACE METAL RACEWAY

A. Manufacturers:

1. Wiremold Model 500 or 700 as required for conductors.

2. Substitutions: Under provisions of Section 26 05 08 Substitutions.

B. Description: Sheet metal channel with fitted cover, suitable for use as surface metal raceway.

C. Size: As required to house wires and match connecting equipment.

D. Finish Ivory enamel unless otherwise noted on drawings, paint as directed by Architect.

E. Fittings, Boxes, and Extension Rings: Furnish manufacturer's standard accessories, complete as required for a complete enclosed installation.

F. Boxes shall be a minimum of 2-3/4" deep.

2.2 WIREWAY

A. Manufacturers:

1. Hoffman.

2. Square "D"

3. Electrical Enclosures

4. Substitutions: Under provisions of Section 26 05 08 Substitutions.

B. Description: General purpose, Oiltight and dusttight or Raintight type wireway as indicated on drawings. If not indicated provide type required to meet applicable codes.

C. Knockouts: Manufacturer's standard.

D. Size: As indicated on Drawings, or larger as required by the NEC.

E. Cover: Hinged cover with full gasketing for raintight and oiltight types.

F. Connector: Slip-in for general purpose and raintight types and flanged for oiltight types.

G. Fittings: Lay-in type with removable top, bottom, and side; captive screws for general purpose, and drip shield for raintight type, and removable top for oiltight type.

H. Finish: Rust inhibiting primer coating with gray enamel finish for interior applications. Stainless steel for exterior applications.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install Products in accordance with manufacturer's instructions.

B. Use flat-head screws, clips, and straps to fasten raceway channel to surfaces. Mount plumb and level.

C. Use suitable insulating bushings and inserts at connections to outlets and corner fittings.

D. Wireway Supports: Provide steel channel as specified in Section 26 05 09 Hangers and

Supports.

E. Close ends of wireway and unused conduit openings.

F. Ground and bond raceway and wireway under provisions of Section 26 05 26 Grounding and Bonding.

G. Install only in locations deemed accessible by the NEC. and local authority. Provide all access panels, etc.,as required to maintain required access.

END OF SECTION

SECTION 26 0553

IDENTIFICATION FOR ELECTRICAL SYSTEMS

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. Provide and install all equipment, labor and material for a complete identification system including but not limited to:

1. Nameplates and labels.

2. Wire and cable markers.

3. Conduit markers.

B. Identify all new and existing conduit, boxes, equipment, etc. as specified herein.

1.3 REFERENCES

A. ANSI/NFPA 70 National Electrical Code

B. Americans with Disabilities Act

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

PART 2 - PRODUCTS

2.1 NAMEPLATES

A. Nameplates shall be laminated phenolic plastic, chamfered edges.

1. 120/208 Volt System:

a) Black front and back, white core, lettering etched through outer covering, white engraved letters on black background.

2. 277/480 Volt System:

a) Orange with white letters.

B. Letter Size:

1. 1/8” letters for identifying individual equipment and loads.

2. 1/4” letters for identifying grouped equipment and loads.

C. Nameplates shall adequately describe the function of the particular equipment involved. Where nameplates are detailed on the Drawings, inscription and size of letters shall be as shown and shop drawing submitted for acceptance. Nameplates for panelboards, switchboards, motor control centers, disconnects and enclosed breakers shall include the panel designation, voltage and phase of the supply. For example, "Panel A, 120/208V, 3-phase, 4-wire." In addition, provide phenolic label in panel to describe where the panel is fed from and location. For example, "Fed From MDP-1:3:5 Electrical Room #E101 Level 1." Nameplates for equipment listed below shall describe particular equipment name and associated panel/circuit, if applicable. The name of the machine on the nameplates for a particular machine shall be the same as the one used on all motor starters, disconnect and pushbutton station nameplates for that machine.

D. The following items shall be equipped with nameplates:

1. All motors, motor starters, motor-control centers, pushbutton stations, control panels, time switches, disconnect switches, transformers, panelboards, circuit breakers (i.e., all 2-pole, 3-pole circuit breakers), contactors or relays in separate enclosures, power receptacles where the nominal voltage between any pair of contacts is greater than 150V, wall switches controlling outlets that are not located within sight of the controlling switch, high voltage boxes and cabinets, large electrical, and electrical systems, junction and pull boxes (larger than 4-11/16"), terminal cabinets, terminal boards, and equipment racks. Nameplates shall also describe the associated panel and circuit number, if applicable.

2.2 WIRE MARKERS

A. Description: Cloth, tape, split sleeve or tubing type wire markers.

B. Locations: Each conductor at panelboard gutters, pull boxes, outlet and junction boxes, and each load connection.

C. Legend:

1. Power and Lighting Circuits: Branch circuit or feeder number indicated on Drawings including neutral conductor.

2. Control Circuits: Control wire number indicated on schematic and interconnection diagrams on shop drawings.

2.3 CONDUIT/JUNCTION BOX COLOR CODE

A. All conduit system junction boxes (except those subject to view in public areas) shall be color coded as listed below:

COLOR CODE FOR JUNCTION BOXES	KRYLON PAINT NUMBER
Fire Alarm	Safety Orange K02410
Normal Power 277/480 volt	Leather Brown K02501A00
Normal Power 120/208 volt	Gloss Black K01601A00
Fiber Optics	Safety Purple K01929
Sound System	Daisy Yellow K01813A00
Intercom	True Blue K01910
Computer/Data	Bright Gold K01701
BAS	Gloss White K01501A00
Security/CCTV	Saddle Tan K03554
Telephone	Safety Green K02012
Grounding	Fluorescent Green K10339

B. Conduit (not subject to public view) longer than 20’ shall be painted with above color paint band 20’ on center. Paint band shall be 4" in length applied around entire conduit. Where conduits are parallel and on conduit racking, the paint bands shall be evenly aligned. Paint shall be neatly applied and uniform. Paint boxes and raceways prior to installation, or tape conduits and surrounding surfaces to avoid overspray. Paint overspray shall be removed.

C. Junction boxes and conduits located in public areas (i.e. areas that can be seen by the public) shall be painted to match surface attached to. Provide written request to A/E for interpretation of public areas in question.

2.4 CONDUIT/JUNCTION BOX MARKER

A. All new and existing junction boxes/cover plates for power, lighting and systems (except those installed in public areas) shall adequately describe its associated panel and circuit reference number(s) within (i.e. ELRW-2, 4, 6), or systems within (i.e. fire alarm, intercom, etc.). Identification shall be neatly written by means of black permanent marker. Paint one-half of cover plate with appropriate color above, and one-half with associated panel/circuit or system as described above. Junction box cover plates located in public areas shall be identified with small phenolic labels securely attached. Label colors to be determined by A/E. Large pull/junction boxes (8" x 8" or larger) shall be color identified by painting the corners of box cover plate with specified colors at 45 degree angles; phenolic labels as specified herein.

B. Identify conduit not installed in public areas with corresponding panel/circuit numbers or corresponding system type as described above. Spacing 20 ft. on center adjacent to color identification bands.

PART 3 – EXECUTION

3.1 PREPARATION

A. Degrease and clean surfaces to receive nameplates and labels.

3.2 APPLICATION

A. Install nameplate parallel to equipment lines.

B. Secure nameplate to equipment front using stainless steel pop rivets.

C. Secure nameplate to inside surface of door on panelboard that is recessed in finished locations.

D. Nameplates installed inside on dead front cover shall be self-adhesive tape. Do not drill or install screws in dead front.

E. Identify new and existing conduit, junction boxes, and outlet boxes using field painting.

F. Install wire markers at all new connections and terminations, and at existing connections and terminations modified or altered.

END OF SECTION

SECTION 26 0813

TESTS AND PERFORMANCE VERIFICATION OF ELECTRICAL SYSTEM

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. This section pertains to the furnishing of all labor, materials, equipment and services necessary to test and prove performance of the electrical system.

B. Operate system for a three day period. Do performance verification work as required to show that the system is operating correctly in accordance with design. Supply instruments required to read data. Adjust system to operate at the required performance levels.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 TESTS

A. System:

1. General: After installation of all conductors and before final acceptance, make required tests to determine proper functioning of all circuits. Furnish all necessary instruments required to make tests and correct any deficiencies found. Prior to energizing, circuits shall be "rung-out" to verify opens, intentional and non-intentional grounds, continuity and detect short circuits by accepted constant megger.

2. Procedure:

a) All wires in conduit that are shorted or unintentionally grounded shall be replaced.

B. Motors:

1. Test run each motor via motor's control unit in both manual mode and automatic mode. Verify proper operation, voltage and rotation.

C. Grounds:

1. Test each raceway for raceway continuity as called for in Section 26 05 26 Grounding and Bonding.

3.2 DATA PROCESSING

A. Testing Data.

1. Tabulate data for submission.

2. Submit data on 8 1/2" x 11" sheets with date and name of checker with one copy for each O & M Manual.

3. Data shall be submitted and accepted before Check Out Memos are signed or a request for final inspection is made.

B. Equipment Check-Out:

1. At completion of construction after all performance verification and testing information has been gathered, submitted, and approved, provide one copy of this information to the Authorized Manufacturer's Representative of the equipment.

   a) Manufacturer's Authorized Representative must be trained by the manufacturer and authorized to inspect, adjust, test, and repair equipment.

2. Work required under this section shall include having the representative examine the performance verification information, check the equipment in the field while it is in operation, and sign a Check Out Memo form for a record. (See Section 26 01 00 Operation and Maintenance Manuals).

   a) Check out of equipment is to include examining performance of equipment and certifying equipment has been installed per manufacturer's recommendations, that all necessary adjustments have been performed and that equipment is operating properly.

3. Submit one copy (for each O & M Manual) of the memo on each major item of equipment. Accepted memos shall be inserted in each O & M manual with the performance verification information and submittal data. Memos shall be submitted and accepted before instruction to Owner or a request for final inspection.

4. Items requiring Check Out Memos are all major items of equipment such as (but not limited to):

   a) Panels, distribution panels, switchboards.

   b) Any other equipment noted to be checked-out by Engineer during construction.

5. Do not submit Check Out Memo form at the time submittal brochures are submitted. This form shall be completed and submitted before instruction in operation to Owner or a request for final inspection.

END OF SECTION

SECTION 26 2716

CABINETS AND ENCLOSURES

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. Provide and install all equipment, labor, material, accessories, and mounting hardware for a complete and operating system for the following:

1. Hinged cover enclosures.

2. Cabinets.

B. Cabinets and enclosures are to include:

1. Terminal blocks,

2. Mounting panel,

3. Ground bus/bar, and

4. All accessories as required for a complete and operating system.

C. Provide and install cabinets and enclosures as specified herein for all systems specified in Divisions 26.

1.3 REFERENCES AND REGULATORY REQUIREMENTS

A. Conform to the requirements of the following:

1. NEMA 250 Enclosures for Electrical Equipment (1000 Volts Maximum)

2. NEMA ICS 4 Terminal Blocks

3. ANSI/NFPA 70 National Electrical Code

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

1.4 SUBMITTALS

A. Submit Product Data: Provide manufacturer's standard data for enclosures and cabinets.

B. Submit Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency specified under “References and Regulatory Requirements.” Include instructions for storage, handling, protection, examination, preparation, installation, and starting of product.

C. Submit actual shop drawings on all cabinets and enclosures showing:

1. Covers.
2. Dimensions - inside and out.
3. Gauge of metal.
4. Manufacturer.
5. Terminal mounting plate, construction, etc.
6. Ground bus/bar.

1.5 EXTRA MATERIALS

A. Provide two of each cabinet key.

PART 2 - PRODUCTS

2.1 GENERAL

A. Unless specifically called for otherwise on Contract Drawings, provide cabinets as specified herein for terminal cabinets mounted indoors. Similarly, provide hinged cover enclosures as specified herein for terminal cabinets mounted outdoors or in locations other then NEMA 1 locations. Also provide hinged cover enclosures for locations where size required is not available in cabinet construction, or if specifically specified as enclosure in Contract Documents.

B. Size:

1. Dimensions of cabinets and enclosures shall meet the dimensions shown on Drawings, dimensions required by NEC, or dimensions sized as required to facilitate all equipment/connections involved installation, whichever is largest.

C. Provide metal barriers to separate compartments containing control wiring operating at less than 50 volts from power wiring.

D. Provide accessory feet and/or mounting brackets for free-standing equipment.

E. Cabinets and enclosures installed outdoors shall be fully weatherproof and watertight.

2.2 HINGED COVER ENCLOSURES

A. Construction:

1. Interior Locations: NEMA Type 1 steel (unless otherwise noted).
2. Exterior Locations: NEMA Type 4X: 304 stainless steel.

B. Covers: Continuous hinge.

C. Enclosure Finish:

1. NEMA 1: manufacturer's standard metallic gray enamel over phosphatized surfaces.
2. NEMA 4X: 304 stainless steel.

D. Lock/Handle:

1. Provide/install key lock handle on all enclosures mounted in rooms/areas/spaces that are not electrical rooms or mechanical rooms. Enclosures installed in electrical rooms need not be and are not required to be lockable.

E. Interior Mounting Plate:

1. Each enclosure is to have interior mounting plate/panel for mounting terminal blocks and electrical components.

2. Plate/panel is to be metal.

F. Ground Bus/Bar:

1. Each enclosure housing surge protective devices or other equipment shall have local ground bar/bus installed. See "Local Ground Bus/Bar" included with this Section.

G. Manufacturers:

1. Hoffman.

2. Electromate Corporation.

3. Austin Enclosures

2.3 CABINETS

A. Construction: Code gauge steel with removable endwalls.

B. Finish:

1. Boxes: galvanized steel.

2. Fronts: gray baked enamel.

C. Fronts:

1. Electrical or Mechanical Room Locations: Screw cover with flush handle or as noted below.

2. Other Locations: Mono-flat with concealed trim clamps, concealed hinges, and flush lock lockable handle.

3. Flush or surface type as shown or called for in Contract Documents.

D. Interior Mounting Plate:

1. Each enclosure is to have interior mounting plate/panel for mounting terminal blocks and electrical components.

2. Panel/plate may be constructed of wood if painted with fire retardant paint of a flame spread rating of Class A, if it meets all applicable codes, and it is acceptable to the Authority Having Jurisdiction, otherwise plate to be metal.

3. Panel/plate shall be metal.

E. Ground Bus/Bar:

1. Each cabinet housing surge suppression equipment or other equipment shall have local ground bar/bus installed. See "Local Ground Bus/Bar" included within this Section.

F. Manufacturer:

1. Sq. "D" Class 6650 Series.

2. Austin Enclosures

3. Hoffman

2.4 TERMINAL BLOCKS

A. Terminal Blocks: ANSI/NEMA ICS 4.

B. Power Terminals: Unit construction type with closed back and tubular pressure screw connectors rated 600 volts.

C. Signal and Control Terminals: Modular construction type suitable for channel mounting with tubular pressure screw connectors rated 300 volts.

D. Provide ground bus terminal block with each connector bonded to enclosure.

2.5 LOCAL GROUND BUS/BAR

A. Size to handle #6 through #14 AWG copper ground wire.

B. Length as required for circuits.

C. Manufacturer:

1. Sq. "D" #PK***GTA Series.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are ready to receive work.

3.2 INSTALLATION

A. Install Products in accordance with manufacturer's instructions.

B. Install enclosures and cabinets plumb. Anchor securely to wall and structural supports at each corner.

C. Install cabinet fronts plumb.

D. Install per NEC and as required for proper clearance. Coordinate with panels.

E. Provide and install terminal cabinets as shown on Drawings or as required by the NEC.

F. Provide and install terminal cabinets wherever required for a complete and operating distribution system whether shown on Drawings or not.

G. Install local ground bus/bar in each terminal cabinet/enclosure that houses surge protective devices or other equipment and bond to cabinet enclosure via mounting screws or #6 AWG copper ground wire.

H. Install enclosures.

END OF SECTION

SECTION 26 2726

WIRING DEVICES

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. Provide and install all equipment, labor, material, accessories, and mounting hardware for a complete and operating system for the following:

1. Wall switches.

2. Receptacles.

3. Device plates and decorative box covers.

1.3 REFERENCES

A. NEMA WD 1 General Requirements for Wiring Devices

B. NEMA WD 6 Wiring Devices Dimensional Specifications

1.4 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and shown.

1.5 SUBMITTALS

A. Submit Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

1. Submit product data on all types of wiring devices including plates and engraving.

B. Submit Manufacturer's Instructions:

1. Indicate application conditions and limitations of use stipulated by product testing agency specified under regulatory requirements.

2. Include instructions for storage, handling, protection, examination, preparation, operation and installation of product.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five years experience.

1.7 EXTRA MATERIALS

A. Provide a minimum of two screwdrivers of each type of tamper proof screw used on project.

B. Turn over to Owner and submit Spare Parts/Maintenance Stock Certification. (See Section 26 01 00 Operation and Maintenance Manual).

PART 2 – PRODUCTS

2.1 GENERAL

A. All devices shall be Specification Grade as minimum.

B. General purpose wiring devices shall meet NEMA standard WD-1, Wiring Devices, General Purpose. Special purpose devices shall conform to the requirements of NEMA standard WD-5, Wiring Devices, Special Purpose.

C. All wiring devices shall bear UL labels.

D. All devices of one type (i.e. all snap switches, all duplex receptacles, etc.) shall be by the same manufacturer. Hazardous Location and Special Purpose Devices may not be available from the same manufacturer; this shall constitute the only exception to this requirement of single-source.

E. Corrosion resistant devices shall be as specified for normal usage, and fabricated of yellow color melamine plastic. Where "Weatherproof" type is indicated for exterior or wet locations, provide matching self-closing cover with gasketed seals at plate/wall junctions and for cover.

F. Provide factory packaged wiring devices having high impact strength molded plastic bodies.

G. Except where specifically required in these Specifications, use of interchangeable type or combination switch-receptacle-pilot devices is not acceptable and shall be removed.

H. All devices are to have terminals, terminations, lugs, etc rate at 75 degree C as a minimum for use with 75 degree C and higher conductor ratings.

2.2 WALL SWITCHES

A. Manufacturers:

1. See Drawings.

B. General:

1. Snap switches for general use shall be maintained contact types, and shall be single-pole, double-pole, three-way, or four-way as required for the specific switching arrangements shown on the drawings. They shall be quiet tumbler operation types, having silver alloy contacts, and meeting all NEMA performance standards. Color to match plates unless specifically noted otherwise in Specifications and/or on Drawings.

2. Switches shall be toggle or key-operated types, as indicated on the Drawings. All key-operated switches shall be keyed alike.

3. Where switches are denoted as having pilot lights, pilot lights shall glow when the switches are "On". Provide pilot light switch with lamp and miniature step-down transformer. The pilot light shall have a red lens, and the lamp shall be long-life type.

4. Jewels for use with switches controlling motors shall be green, and jewels for other purposes shall be amber. All units shall be front relampable.

5. Snap switches installed in hazardous locations shall be UL listed for the type of location (class and division).

6. Voltage and ampere rating of switches shall be marked on switch, and shall conform to voltage of system to which applied.

C. Description: NEMA WD 1, heavy-duty, ac only general-use snap switch.

D. Voltage Rating: 120-277 volts, ac.

E. Current Rating: 20 amperes minimum.

F. Ratings: Match branch circuit and load characteristics.

2.3 RECEPTACLES

A. General:

1. All receptacles shall be of standard NEMA configuration, as indicated on the Drawings, and shall comply with the respective ANSI C73 series standard for the NEMA configuration. Color to match plates unless specifically noted otherwise in specifications and/or on drawings.

2. Duplex receptacles shall have integral UL listed self-grounding clips. Similar, single receptacles shall be provided for plug-in connections of Industrial Fluorescent light fixtures on the same switching circuit. Receptacle face to be impact resistant nylon.

3. Weatherproof duplex receptacles shall be provided in all exterior locations, and shall be ground fault circuit interrupting (GFCI) types, with weatherproof cover plates allowing use of receptacle with cover in closed position.

4. Special purpose receptacles for specific equipment shall be grounding types, having the number of poles, voltage and ampere ratings, and NEMA configurations required by the equipment. For each special purpose receptacle, provide an identical mating plug equipped with cord grip, secured to cord.

5. Duplex receptacles shall have back and side wired screw pressure terminals.

B. Description: NEMA WD 1; heavy-duty general use receptacle.

C. Configuration: NEMA WD 6; heavy-duty, general use type as specified and indicated.

D. Convenience Receptacle: Type 5-20.

E. GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.

F. Manufacturers:

1. See Drawings.

2.4 COVER PLATES

A. All wiring devices shall be provided with standard size one-piece cover plates of suitable configuration for the number and type of devices to be covered.

B. Metallic cover plates shall be used in interior spaces, except as noted below, and shall be fabricated of corrosion-resistant #302 stainless steel having a nominal thickness of .04" and a brushed finish. Screws securing the plates shall have flush (when installed) heads with finish to match plates. Metallic cover plates shall meet all requirements of the National Electrical Code and Federal Specifications.

C. Cover plates for exterior receptacles shall be gasketed covers with hinge allowing plug and cord to be plugged in and activated with cover closed..

D. Cover plate engraving, where required, shall be accomplished by cover plate manufacturer in accordance with instructions given on the Drawings. Metallic plates shall be engraved with black fill.

2.5 COLOR

A. Wiring devices connected to normal power and located in unfinished spaces shall be grey color. Devices connected to normal power and located in finished interior spaces shall be of color selected by Architect from the following list of standard colors: ivory, beige, gray, white, brown, black.

B. Cover plates for devices connected to normal power and located in finished interior spaces shall be of color selected by Architect from the above list of standard colors or #302 stainless steel.

C. All devices and coverplates in paneled walls shall have finish to match paneling.

D. Contractor shall modify any given catalog numbers as required to procure devices and plates of the proper color.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify conditions under provisions of Division 01 General Requirements and any other applicable supplemental requirements/conditions.

B. Verify outlet boxes are installed at proper height.

C. Verify wall openings are neatly cut and will be completely covered by wall plates.

D. Verify floor boxes are adjusted properly.

E. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean debris from outlet boxes.

3.3 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install devices plumb and level.

C. Install switches with OFF position down.

D. Install wall dimmers to achieve full rating specified and indicated after derating for ganging as instructed by manufacturer.

E. Do not share neutral conductor on load side of dimmers.

F. Install receptacles with grounding pole on bottom.

G. Install decorative plates on switch, receptacle, and blank outlets in finished areas.

H. Electrical boxes shall be cleaned and completely free of any debris, dust, etc. prior to the installation of wiring devices.

I. Where two or more switches or receptacles are to be installed adjacent to one another, provide a multi-gang box and combination multi-gang coverplate. Provide proper NEC barriers in boxes which serve devices for both the Normal and Emergency Systems.

J. Provide device coverplates for every device installed. Cover plates shall be installed so that they appear straight with no gaps between plate edges and the wall. Maintain vertical and horizontal to within 1/16 of an inch.

K. In finished areas provide same type of plate for all surface mounted devices as for recessed mounted devices.

L. In any room where new and existing construction is present, all receptacles, switches, and coverplates which are existing to remain shall be changed as required to match new work.

M. Wiring devices shall not be installed in exposed masonry until cleaning of masonry with acids has been completed.

N. All receptacles and switches shall be grounded by means of a ground wire from device ground screw to outlet box screw and branch circuit ground conductor. Strap alone will not constitute an acceptable ground.

O. All wiring devices, relays, contactors, pushbuttons, selector switches, pilot lights, etc. shall be installed in approved enclosures rated for the appropriate NEMA classified environment.

P. All devices shall be installed so that only one wire is connected to each terminal.

Q. Once construction is substantially completed, replace all damaged, burned, or scorched wiring devices.

R. Receptacles shown to be floor mounted shall be installed in floor boxes (with coverplates) which are approved for this use.

S. Connect wiring devices by wrapping conductor around screw terminal.

T. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

U. Install protective rings and split nozzle on active flush cover service fittings.

V. Install local room area wall switches at door locations on the lock side of the door approximately 4” from the jamb. Where locations shown on the Drawings are in question, provide written request for information to A/E prior to rough-in.

3.4 NEUTRAL CONDUCTOR CONNECTIONS

A. Each receptacle’s "in" and "out" phase and neutral conductors shall have an additional conductor for connection to device. The practice of "looping" conductors through receptacle boxes shall not be acceptable.

3.5 INTERFACE WITH OTHER PRODUCTS

A. Coordinate locations of outlet boxes provided under other Sections of these Specifications to obtain mounting heights specified and indicated on Drawings.

3.6 FIELD QUALITY CONTROL

A. Inspect each wiring device for defects.

B. Operate each wall switch with circuit energized and verify proper operation.

C. Verify that each receptacle device is energized.

D. Test each receptacle device for proper polarity.

E. Test each GFCI receptacle device for proper operation.

3.7 ADJUSTING

A. Adjust devices and wall plates to be flush and level.

END OF SECTION

SECTION 26 2819

ENCLOSED DISCONNECT SWITCHES

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 DESCRIPTION

A. Provide all labor, materials, and equipment necessary to properly install switches as shown on the Drawings and as required by codes.

1.3 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver switches in factory wrapped packaging to the site. Handle switches carefully to prevent damage. Store in a clean, dry space protected from dirt, water, and physical damage. Do not install damaged switches.

1.4 QUALITY ASSURANCE

A. The manufacturer of switches shall be the same as that of the panelboards.

1.5 SUBMITTALS

A. Submit catalog cut sheet on each type of disconnect switch to be used on this project.

PART 2 – PRODUCTS

2.1 CONSTRUCTION

A. Switches shall be heavy duty types with visible, quick-make, quick-break blades.

B. Provide ground bus, and where required a solid neutral bus.

C. Switches shall be fusible or nonfusible as denoted on the Drawings or as required by the equipment served from the switch. Fusible switches shall have rejection type fuse holders.

D. Terminal lugs shall be rated for 75 degrees Centigrade.

E. Enclosures, unless otherwise noted, shall be NEMA 1 for indoor locations and NEMA 4X stainless steel for outdoor locations as a minimum. All switches mounted outdoors including those noted to be NEMA 3R on drawings shall be heavy duty type 4X, watertight, corrosion resistant

F. The enclosure shall be interlocked with the switch handle such that the enclosure door or cover cannot be opened with the switch in the "ON" position. The switch handle shall be capable of being padlocked in the "OFF" position but not in the "ON" position.

G. Finish for NEMA I units shall be standard baked gray enamel finish over a rust inhibiting phosphate primer.

2.2 RATING

A. The size, number of poles, and fusing for each switch shall be as denoted on the Drawings. As a minimum, no less than one pole for each ungrounded conductor shall be provided. Switches shall be rated 250 VAC or 600 VAC as required by the circuit to which it is connected.

B. Switches serving motors with more than one set of windings shall have the number of poles necessary to disconnect all conductors to all windings in a single switch. Switches serving motor loads shall be horsepower rated of sufficient size to handle the load.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Install all switches in accordance with the manufacturer's written instructions, NECA National Electrical Installation Standards, the applicable requirements of the NEC, and recognized industry practice.

B. All switches shall be firmly anchored to walls and supporting structures (where used) using appropriate installation. Switches shall be installed with the turning axis of their handles approximately 5'-0" above finished floor unless otherwise indicated. Provide rigid steel (galvanized for exterior use) mounting stands, brackets, plates, hardware, and accessories for a complete installation.

C. Switches shall be mounted in accessible locations chosen where the passageway to the switch is not likely to become obstructed. Where a switch serves as the disconnecting means for a load, the switch shall be located as close as practical to the load with the switch handle within sight of the load.

D. Provide and install lugs on disconnect switch as required to accept conductors called for on Drawings.

E. Disconnect switches shall not be mounted on equipment unless specifically noted or required, and meet all applicable codes, etc. If switches are noted or required to be mounted on equipment, they shall have vibrator clips on fuses and be connected to conduit system with liquid tight flexible conduit.

END OF SECTION