

**SKAGIT COUNTY
CONCRETE COMMUNITY CENTER TI
PROJECT**

Concrete Community
Center
45821 Railroad Avenue
Concrete, WA 98237

PROJECT MANUAL



**CARLETTI
ARCHITECTS P.S.
116 East Fir, Suite A
Mount Vernon, WA 98273**

February 18th, 2025

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NOT USED

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NOT USED

SECTION 00 11 00

NOTICE OF CALL FOR BIDS

Skagit County Concrete Community Center TI

NOTICE IS HEREBY GIVEN that sealed bids will be received on March 25th, 2025, until 12:00 pm at the Skagit County Commissioners Administrative Building, 1800 Continental Place, Mount Vernon, Washington 98273. Bids must be received at the County Commissioners' Office prior to the bid opening time. Bid Proposals will be recorded as to time and date received and secured until the time set for the opening. All bids must be plainly marked on the outside:

Skagit County Concrete Community Center TI

OPENING OF THE BID PROPOSALS:

At 12:00 pm or as soon as possible thereafter on March 25th, 2025, Bid Proposals will be opened and publicly read aloud in the Commissioners Hearing, 1800 Continental Place, Mount Vernon, WA. 98273. Attendance will be in person or remote video via online link at: <https://us06web.zoom.us/j/87180001980?pwd=eEVGUGkxZ3NkQkhYSnhBMEo2RTQrdz09> or by telephone: (253) 215-8782; Meeting ID: 871 8000 1980.

This project is partially funded through the Washington State Community Development Block Grant program with federal funds from the U.S. Department of Housing and Urban Development. The project consists of tenant improvements including but not limited to: kitchen, toilet rooms, electrical, HVAC, as well as installation of new emergency generator and associated equipment.

The Project estimate is \$1,000,000, and all work performed on this project will be subject to the higher of the prevailing federal or state wage rates.

The project bid documents (plans, specifications, addenda, and Bidders List) are provided free of charge to Prime Bidders and Subcontractors on the Skagit County's World Wide Web site, www.skagitcounty.net/departments/rfp on or after February 18th, 2025. The County will maintain a plan holders list, and Contractors who download plans and specifications are advised to email khansen@co.skagit.wa.us for inclusion on the plan holders list to receive issued bid addenda.

A mandatory pre-bid conference for prospective bidders will be held at the building at 45821 Railroad Avenue, Concrete, WA at 10:00 am on March 3rd, 2025. A summary of questions and answers will be shared as a bid addendum.

Questions regarding the project must be submitted to Peter Carletti and Tom Theisen email: peter@carlettiarchitects.com , tom@carlettiarchitects.com. Questions must be received by March 14th, 2025, 3:00 pm. A confirmation of the question(s) receipt will be sent within 48 hours; if a bidder does not receive such confirmation it is solely responsible to re-send the question(s). County's responses will be posted for all bidders by addendum with final no later than March 18th, 2025. No oral responses from the Owner or its representatives may be relied upon by bidders.

The Successful Bidder will be required to furnish the necessary additional Bond(s) for the faithful performance of the Work, as prescribed in the Bid Documents.

LATE SUBMITTALS WILL NOT BE ACCEPTED. All submittals will become the property of Skagit County Government and may not be returned.

CONTRACTOR REGISTRATION:

Pursuant to RCW 39.06, the Bidder shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27. In order to perform public work, the successful Bidder and Subcontractors, prior to Contract award, shall hold or obtain such licenses and registrations as required by State Statutes and Codes, and Federal and local laws and regulations and a City of Mount Vernon business license.

BID SECURITY:

Certified check, bank cashier's check or bid bond congruent with the Form of Bid Bond as identified in the "Instructions to Bidders" is required to be submitted with each proposal, in the amount equal to five percent (5%) of the total basic bid plus additive alternate bids (if applicable). Make bid security payable to the Skagit County, a Municipal Corporation, furnish bond executed by a licensed bonding agency authorized to do business in the locality of the Project.

RIGHT TO ACCEPT OR REJECT:

The Owner shall reserve the right to reject any or all proposals and the right to waive any irregularities or informalities in any proposal, subject to the Laws of the State of Washington as pertinent to Public Works and congruent with requirements and policies of Skagit County, and as may be deemed in the best interest of the Owner. In particular, the Owner reserves the right to reject a proposal which is not accompanied by the required bid security or subcontractors listing as described heretofore, and incomplete or irregular proposals which may exclude any item(s) as may be required by the Bid Documents. **NO PROPOSALS WILL BE ACCEPTED AFTER THE TIME SET FOR RECEIPT OF BID PROPOSALS.**

Skagit County is an Equal Opportunity and Affirmative Action Employer

Small, Minority and Women-Owned firms are encouraged to submit bids.

WITHDRAWAL OF BID:

No proposal may be withdrawn after the time set for the opening thereof unless the Award of the Contract is delayed for a period of forty-five (45) calendar days.

NOTICE GIVEN BY ORDER OF THE BOARD OF COUNTY COMMISSIONERS THIS

day of _____ 2025.

Clerk of the Board
Skagit County Commissioners

Published in the Daily Journal of Commerce – February 20th and 27th, 2025.

END OF SECTION

SECTION 00 21 00

INSTRUCTION TO BIDDERS

A. EXAMINATION OF SITE AND CONSTRUCTION DOCUMENTS

1. Before submitting a proposal, the bidder shall:
 - a. Carefully examine the drawings and specifications,
 - b. Visit the site of the work,
 - c. Fully inform itself of existing conditions and limitation, relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of its obligation to furnish all material and labor necessary to carry out the provisions of this contract.
 - d. Rely entirely upon its own judgment in making its proposal,
 - e. Include in its bid a sum sufficient to cover all items required by the contract including all labor, materials, and services necessary to complete this project.

B. ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder verbally. Every request for such interpretation should be in writing addressed to the Architect, and to be given consideration, must be received by the date as noted in the Advertisement for Bid. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications. Failure of any bidder to receive addenda shall not relieve any such bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the contract documents. Approval of requested substitutions or proposed equals will be by Addenda as above.

C. PRODUCT SUBSTITUTIONS

1. Substitutions: Bids must be based upon the specific articles and materials named in the Drawings and Specification. Substitution may be made only under the following conditions:
 - a. Prior to Bid Opening: Not less than ten calendar days prior to bid opening, prime bidders may submit to the Architect written requests for approval of articles or materials, accompanied by complete descriptions, technical data and samples. Approval or rejection of the proposed substitutions will be made by addenda issued to all bidders. Submit material / product requests as specified in Section 01 60 00.
2. After Award of Contract: Approval of substitution will be made only in

exceptional cases where the Contractor submits satisfactory evidence to the Architect that through no fault of its own, specified or otherwise approved items cannot be obtained in time to avoid delay to the work. Approval in such cases shall conform to the other requirements above.

D. INTERPRETATIONS AND CORRECTIONS TO BIDDING DOCUMENTS

Bidders and Sub-bidders shall promptly notify the Architect of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions. Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least three days prior to the date for receipt of Bids. Any interpretation, correction or change of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

E. FORM OF BID

A Bid Form is attached to these Drawings and Specifications. Make Bid according to Form. Fill in all spaces. Bids shall not contain any recapitulation of work done. State numbers in writing and in figures. Completed form must be without interlineation, alteration or erasure. Signatures must be in longhand.

F. POWER OF ATTORNEY

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

G. ORAL AND TELEPHONIC BIDS

Oral and telephonic modifications of bids cannot be considered.

H. SUBMISSION OF BID

Enclose all items on Bid Submittal Checklist, Section 00 43 93, in opaque sealed envelope. Address to: Skagit County Board of Commissioners. Particulars are in the Advertisement for Bid. Deliver in person or by post. Bidder is responsible for delivery of bid at or before the time set for bid opening. The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. The Owner reserves the right to reject any bid of the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligation of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

I. BID BOND

Each bidder agrees to furnish a bid bond AIA Document A310 or a certified check amounting to five percent (5%) of the bid, included with its proposal. When left in escrow with the Owner its amount or penalty sum is the measure of damages which the Owner will sustain by the failure of the bidder to execute the Form of Agreement and

furnish a 100 percent Performance and Payment Bond, AIA Document A312, and if the bidder fails to deliver said documents within 10 days after written notice, notice of the award of the contract to him, then the check shall become the property of the Owner or the Bid Bond shall remain in full effect. But if the bid is not accepted within 45 days after the time set for opening bids, or if the bidder delivers said contract and the bonds, then the check shall be returned to him, or the bid bond shall become void. The right is reserved to hold the bid bonds of the three lowest bidders until the award of the contract or for a period of 45 days, whichever is the shorter time. Bids of all unsuccessful bidders will be returned as soon as feasible after the bid opening.

J. WITHDRAWAL OF BIDS

Any bidder may withdraw its bid either personally or by written request at any time prior to the hour set for the bid opening. No bid may be withdrawn or modified after the time set for opening unless and until the award of the contract is delayed for period exceeding (45) forty-five days.

K. TIME OF COMPLETION

Bidder must agree to commence work within (45) forty-five days of contract execution, Substantially Complete the Work within (120) one hundred twenty consecutive calendar days from the date of execution and reach Final Completion of the Work within (60) sixty consecutive calendar days thereafter. Time is of the essence and contractor shall make every reasonable effort to adhere to the established schedule.

Note- If it is not possible to have the generator fully functional by the date of Substantial Completion, the other work must still be considered "Substantially Complete" and the building occupiable.

L. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with its delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of the Contract and for payment of all persons performing labor under the Contract and furnishing material or services in connection with the Contract as described in the Contract Documents. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner, registered in the State of Washington, Insurance Commissioner's Office. List Bonding Agent and address of same.

M. CONTRACTOR'S AND SUBCONTRACTOR'S PUBLIC LIABILITY

Vehicle Liability and Property Damage Insurance shall be furnished as required by the Supplementary General Conditions.

N. BUILDER'S RISK INSURANCE

Property Damage Insurance shall be as required by the Bonds and Certificates Section 00 61 00 and Supplementary General Conditions Section 00 73 00.

LAWS AND REGULATIONS, PREVAILING WAGES

The Bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they shall be deemed to be included in the Contract the same as though written out in full therein. All persons or firms performing on public service or construction contracts shall submit to the State, in advance of the work of all trades, a completed Form SF 9882, "Statement of Intent to Pay Prevailing Wages," accompanied by the filing fees for each Statement (Statements are available at Offices of Washington State Department of Labor and Industries). Refer to Supplementary General Conditions for Prevailing Wage information applicable to this project required by law.

O. QUALIFICATIONS OF BIDDERS

1. The Architect and / or the Owner may make such investigations as necessary to determine the ability of a Bidder to perform the work, and the Bidder shall furnish all such information and data as may be requested prior to bidding. The Owner reserves the right to reject any bid if the evidence submitted by, or if investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to perform the obligations of the Contract and to complete the work contemplated therein. Conditional Bids will not be accepted.
2. To enable the Owner to evaluate the competency and financial responsibility of a Contractor, when requested by the Owner, furnish the following information, which shall be sworn to under oath by him or by a properly authorized representative of the Bidder.
 - a. The address and description of the Bidder's plan and place of business.
 - b. The name and/or Articles of Co-Partnership or Incorporation.
 - c. Itemized list of equipment available for use on the project.
 - d. A certified or authenticated financial statement, dated within thirty (30) days prior to the opening of bids. The Owner may require that any items of such statements be further verified.
 - e. A list of present contracts, including dollar values, percentage of completion and the names of all Owners involved.
 - f. A statement regarding any past, present and pending litigation with an Owner.
 - g. Such additional information as may be required that will satisfy the Owner that the Bidder is adequately prepared, in technical experience or otherwise, to fulfill the contract.
 - h. Sufficient documentation to ensure that the Contractor is in compliance with the current Fair Employment Practice requirements of the Owner.

- P. **Prior to award of Bid the Owner shall verify all items listed under Bidder's Responsibility Criteria. If criteria cannot be verified bidder will be deemed non-responsive.**

POST-BID INFORMATION

1. The successful bidder shall submit to the Architect, within ten calendar days of the notifications of selection for award of the Contract, the following:
 - a. Statement of Cost for each major item of work or subcontract included in the Bid, equaling the total Contract award, and such other data as are required by the General Conditions, including Article 5.2.

Q. LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they shall be deemed to be included in the Contract the same as though written out in full therein. Bidders are advised that if successful, they will be required to meet all applicable federal, state, and local laws pertaining to permits, licenses, fees and taxes, as well as laws pertaining to employment and wages. Bidders are responsible for determining the extent and applicability of such laws.

R. DEFINITIONS

1. Bid Documents include the Instructions to Bidders, the Bid Form, and the contract Documents, including any Addenda.
2. Contract Documents consist of the Owner-contractor Agreement, the Conditions of the Contract (General, Supplementary, and other Conditions), the Drawings, the Specifications, and all Addenda issued prior to and all Modifications issued after the execution of the Contract.
3. Addenda are written or graphic instruments issued prior to the execution of the contract which modify or interpret the Bidding Documents, including the drawings and specifications, by addition, deletion, clarification, or correction. Addenda issued prior to the receipt of Bids will be mailed, faxed, or delivered to each person or firm recorded by the Engineer as having received the Bid Documents.

S. AWARD OF THE CONTRACT(S) / REJECTION OF BIDS

1. The Contract will be awarded to the responsible bidder(s) submitting the lowest proposal complying with the condition of the Advertisement for Bid and these contract documents provided the bid is reasonable and in the best interest of Skagit County. Items in this bid, approved for contract by the Board of Commissioners, shall be awarded by Skagit County.

2. Skagit County reserves the right to reject any and all bids and to waive any informality in bids received whenever such rejection or waiver is in the interest of the County. Skagit County reserve the right to select all or individual alternate bid items whichever is determined to be in the best interest of the County.
3. The bidder to whom the award is made will be notified at the earliest practicable date.

T. DISQUALIFICATION OF BIDDERS

1. Any one or more of the following causes may be considered sufficient for the disqualification of a Bidder and the rejection of its bid or bids:
 - a. Evidence of collusion among Bidders.
 - b. Lack of expertise as shown by past work and judged from the standpoint of workmanship and performance history.
 - c. Uncompleted work under other contracts which, in the judgment of the Skagit County, might hinder or prevent the prompt completion of additional work if awarded.
 - d. Being in arrears on existing contracts, in litigation with an Owner, or having defaulted on a previous contract.
 - e. Delinquent taxes due to State and Federal Government including: B&O, L&I, payroll, social security and Medicare.
 - f. Contractor's naming oneself as a Subcontractor for which they have no expertise and working knowledge directly within the firm.
 - g. Federal or State debarment from contracts.

END OF SECTION

SECTION 00 31 00

INFORMATION AVAILABLE TO BIDDERS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 REPORTS

- A. The following reports are included:
 - 1. Asbestos Containing Material and Lead Based Paint Survey, dated November 21st, 2024, prepared by ALL4 LLC, 16 pages total.

1.03 PURPOSE

- A. Reports are for information and reference purposes only and do not contain Contract Work.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

November 21, 2024

Mr. Eric Peterson
Skagit County Facilities
1800 Continental Place
Mount Vernon, WA 98273

Re: Asbestos Containing Material and Lead Based Paint Survey – Concrete Community Center – Concrete, WA

Mr. Peterson:

ALL4 LLC has performed an asbestos containing material (ACM) and lead based paint (LBP) survey at the Concrete Community Center (Subject Property) located at 45821 Railroad Avenue in Concrete, Washington. The survey was conducted in preparation for renovation and remodel work planned at the property.

SCOPE OF WORK

This survey evaluated client specific interior building components located in the community center for potential ACM and LBP. The intent of this survey was to comply with the requirement of a “good faith inspection” in conjunction with redevelopment work being considered at the subject property. The inspection results also provide information to workers that may disrupt suspected materials. The survey was conducted by visually evaluating building materials in all accessible areas and collecting samples for laboratory analysis. The sample locations and a summary of results are presented in Tables 1 and 2. The survey was limited to ‘visible and accessible’ materials specified by the client.

The survey was conducted on November 12, 2024 by Mr. Thomas Davis. Mr. Davis is a registered AHERA Asbestos Building Inspector (Certification #: NES-BIR-20240826-21) and a Certified Lead Inspector (Certification #: 6063).

Potential ACM samples were analyzed using Polarized Light Microscopy by EPA Method 600/R-93/116 at NVL Laboratories in Seattle, Washington. For samples containing more than one layer of material, the laboratory identified each layer individually and provided a total percentage of asbestos contained in each layer. The definition of an ACM is a material that contains greater than 1% asbestos by weight (29 CFR 1910.1001(b), WAC 296-62-07703).

Potential LBP samples were collected as paint chips from painted surfaces. The paint-chip samples were analyzed at NVL Laboratories in Seattle, Washington using EPA Method 7000B. The definition of an LBP is a paint, or surface coating, that contains greater than 0.5% lead by weight (24 CFR 35.110; WAC 365-230-020(50)).

ASBESTOS CONTAINING MATERIAL RESULTS

Five bulk asbestos samples were collected from flooring material and related miscellaneous materials (mastics) specified by the client.

ACM was identified at one sampled location in the community center.

1. Sample *Floor-3* was collected from 12" x 12" vinyl floor tiles and black asphaltic mastic located at the threshold between the great room and the office area. The sample contained 3% Chrysotile asbestos and exceeds the definition of an ACM. The asbestos was identified in the black asphaltic mastic (layer 2 of 2).

The original Method 600/R-93/116 asbestos analytical data report is included in Appendix A. ACM sample descriptions and results are presented in Table 1.

LEAD BASED PAINT RESULTS

Four paint chip samples were collected from the light blue, brown, tan, and off-white paints present at community center in the locations specified by the client.

LBP was not identified to be present at the sampled locations.

The original Method 7000B lead based paint analytical data report is included in Appendix B. LBP sample descriptions and results are presented in Table 2.

CONCLUSIONS

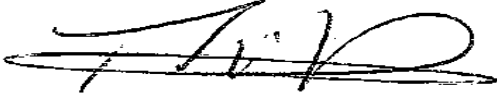
ACM was identified in one of five samples collected from the community center.

The black asphaltic mastic associated with 12" x 12" floor tiles was identified as ACM. If the mastic material is encountered at any other location during remodel work, it should be assumed to be ACM or tested to confirm a negative result.

LBP was not identified at the subject property.

On behalf of ALL4 LLC, I appreciate the opportunity to provide Skagit County Parks with this ACM/LBP survey for the residential property and fairgrounds restroom structure located in Mount Vernon, Washington. If you have any questions regarding the report's findings, please call me at (360) 752-9571.

Sincerely,



Thomas Davis, L.G. - **ALL4 LLC**
AHERA Building Inspector Certification #BI/R-NES-07-28-23-10
Lead Inspector Certification #6063

Table 1
ACM Sample Analytical Results
Concrete Community Center, Concrete, WA
Skagit County Facilities

Sample ID	Date	Sample Location and Description	Analytical Result (%) ^a	Designation
Sheet Vinyl-1	11/12/2024	Collected from blue and white sheet vinyl flooring located in the back of the Thrift Store.	ND	Not ACM
Floor-1	11/12/2024	Collected from the wood flooring located at the back of the Thrift Store.	ND	Not ACM
Floor-2	11/12/2024	Collected from wood flooring located below carpet in the back of the Thrift Store.	ND	Not ACM
Mastic-1	11/12/2024	Collected from wood flooring mastic located at the threshold between the great room and the office.	ND	Not ACM
Floor-3	11/12/2024	Collected from the 12" x 12" vinyl floor tiles and black asphaltic mastic located at the threshold between the great room and the office. The asbestos was identified in the black asphaltic mastic (layer 2 of 2).	3% Chrysotile	ACM

^(a) Asbestos containing material is defined as a building material containing 1.0% asbestos or greater by volume

BOLD and Shaded - indicates that the detected concentration exceeded the definition of an ACM

ND - indicates analyte was Not Detected at level above reporting limit (shown in parentheses)

Table 2
LBP Sample Analytical Results
Concrete Community Center, Concrete, WA
Skagit County Facilities

Sample ID	Date	Sample Location and Description	Analytical Result (%) ^(a)	Designation
Paint-1	11/12/2024	Collected from light blue color in bathroom at baseboard heater.	<0.0051%	Not LBP
Paint-2	11/12/2024	Collected from the brown trim paint located at the doorway into the restroom area.	<0.0048%	Not LBP
Paint-3	11/12/2024	Collected from the tan paint in the Kitchen.	0.0055%	Not LBP
Paint-4	11/12/2024	Collected from the off-white main color paint located in the great room.	<0.0070%	Not LBP

^(a) Lead based paint is defined as a surface coating containing 0.5% lead by volume or greater
BOLD and Shaded - indicates that the detected concentration exceeded the definition of a LBP
 ND - indicates analyte was Not Detected at level above reporting limit (shown in parentheses)



APPENDIX A

Asbestos Containing Material Laboratory Analytical Report
(Method EPA 600/R-93/116)

November 20, 2024



Thomas Davis
All4 LLC
228 E Champion St #101
Bellingham, WA 98225

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2420721.00

Client Project: Skagit Co. Facilities Concrete Community Center
Location: 45821 Railroad Street Concrete, WA

Dear Mr. Davis,

Enclosed please find test results for the 5 sample(s) submitted to our laboratory for analysis on 11/14/2024.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with **U. S. EPA 40 CFR Appendix E to Subpart E of Part 763**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116**, Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

A handwritten signature in black ink that reads 'Hilary Crumley'.

Hilary Crumley, Manager Asbestos Laboratory

The logo for NVL LABS, featuring the letters 'NVL' in a large, outlined, sans-serif font, followed by 'LABS' in a smaller, outlined, sans-serif font.

Testing

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: All4 LLC
 Address: 228 E Champion St #101
 Bellingham, WA 98225

Batch #: 2420721.00
 Client Project #: Skagit Co. Facilities Concrete Community Center
 Date Received: 11/14/2024
 Samples Received: 5
 Samples Analyzed: 5
 Method: EPA/600/R-93/116

Attention: Mr. Thomas Davis
 Project Location: 45821 Railroad Street Concrete, WA

Lab ID: 24124528 Client Sample #: Floor-1

Location: 45821 Railroad Street Concrete, WA

Layer 1 of 2	Description: Off-white soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND
Layer 2 of 2	Description: Brown wood material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Wood flakes	Wood fibers 81%		None Detected ND


Lab ID: 24124529 Client Sample #: Floor-2

Location: 45821 Railroad Street Concrete, WA

Layer 1 of 4	Description: Off-white soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND
Layer 2 of 4	Description: Brown wood material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Wood flakes	Wood fibers 80%		None Detected ND
Layer 3 of 4	Description: Off-white soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND
Layer 4 of 4	Description: Yellow foamy material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Synthetic foam	None Detected ND		None Detected ND

Lab ID: 24124530 Client Sample #: Floor-3

Location: 45821 Railroad Street Concrete, WA

Sampled by: Client		
Analyzed by: Carena Lan	Date: 11/19/2024	
Reviewed by: Hilary Crumley	Date: 11/20/2024	Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: All4 LLC
 Address: 228 E Champion St #101
 Bellingham, WA 98225

Batch #: 2420721.00
 Client Project #: Skagit Co. Facilities Concrete Community Center
 Date Received: 11/14/2024
 Samples Received: 5
 Samples Analyzed: 5
 Method: EPA/600/R-93/116

Attention: Mr. Thomas Davis
 Project Location: 45821 Railroad Street Concrete, WA

Layer 1 of 2	Description: Tan vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Fine particles	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 2	Description: Black asphaltic mastic	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % Chrysotile 3%

Lab ID: 24124531 Client Sample #: Mastic-1

Location: 45821 Railroad Street Concrete, WA

Layer 1 of 1	Description: Cream soft mastic	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
---------------------	---------------------------------------	---	---	--

Lab ID: 24124532 Client Sample #: Sheet Vinyl-1

Location: 45821 Railroad Street Concrete, WA

Layer 1 of 3	Description: Gray sheet vinyl	Non-Fibrous Materials: Vinyl/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 3	Description: Light gray fibrous backing with mastic	Non-Fibrous Materials: Binder/Filler, Fine particles, Mastic	Other Fibrous Materials:% Glass fibers 20%	Asbestos Type: % None Detected ND
Layer 3 of 3	Description: Gray cementitious material	Non-Fibrous Materials: Binder/Filler, Cementitious particles	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND

Sampled by: Client
Analyzed by: Carena Lan
Reviewed by: Hilary Crumley
Date: 11/19/2024
Date: 11/20/2024
 Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

ASBESTOS LABORATORY SERVICES



Company All4 LLC	NVL Batch Number 2420721.00
Address 228 E Champion St #101 Bellingham, WA 98225	TAT 5 Days AH No
Project Manager Mr. Thomas Davis	Rush TAT
Phone (360) 752-9571	Due Date 11/21/2024 Time 1:45 PM
Cell (253) 906-6648	Email tdavis@all4inc.com
	Fax (360) 752-9573

Project Name/Number: Skagit Co. Facilities Concrete Community	Project Location: 45821 Railroad Street Concrete, WA
---	---

Subcategory PLM Bulk

Item Code ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 5 Rush Samples

Lab ID	Sample ID	Description	A/R
1	24124528	Floor-1	A
2	24124529	Floor-2	A
3	24124530	Floor-3	A
4	24124531	Mastic-1	A
5	24124532	Sheet Vinyl-1	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	UPS				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	11/14/24	1345
Analyzed by	Carenna Lan		NVL	11/19/24	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 11/14/2024
 Time: 3:32 PM
 Entered By: Kelly AuVu



ASBESTOS CHAIN OF CUSTODY

Turn Around Time

- 1 Hour 24 Hours 4 Days
- 2 Hours 2 Days 5 Days
- 4 Hours 3 Days 10 Days

Please call for TAT less than 24 Hours

Company ALL4 Inc.
 Address 228 East Champion Street, Suite #101
Bellingham, WA 98225
 Phone (360) 752-9571

Project Manager Thom Davis
 Cell (253) 906 - 6648
 Email tdavis@all4inc.com
 Fax () -

Project Name/Number <u>Skagit Co. Facilities: Concrete Community Center</u>	Project Location <u>45821 Railroad Street Concrete, WA</u>
---	--

- PCM Air (NIOSH 7400) TEM (NIOSH 7402) TEM (AHERA) TEM (EPA Level II Modified)
- PLM (EPA 600/R-93-116) EPA 400 Points (600/R-93-116) EPA 1000Points (600/R-93-116)
- PLM Gravimetry (600/R-93-116) Asbestos in Vermiculite (EPA 600/R-04/004) Asbestos in Sediment (EPA 1900 Points)
- Asbestos Friable/Non-Friable (EPA 600/R-93/116) Other _____

Reporting Instructions _____
 Call () - Fax () - Email _____

Total Number of Samples _____

Sample ID	Description	A/R
1	Floor-1	
2	Floor-2	
3	Floor-3	
4	Mastic-1	
5	Sheet Vinyl-1	
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Print Name	Signature	Company	Date	Time
Sampled by <u>Thom Davis</u>		<u>ALL4</u>	<u>Nov. 12, 2024</u>	<u>1555</u>
Relinquish by				

Office Use Only

Print Name	Signature	Company	Date	Time
Received by <u>Kenn Aiken</u>		<u>Nuv</u>	<u>11/14/24</u>	<u>1345013</u>
Analyzed by				
Called by				
Faxed/Email by				



APPENDIX B

Lead Based Paint Laboratory Analytical Report
(Method EPA 7000B)

November 20, 2024

Thomas Davis

AII4 LLC

228 E Champion St #101
Bellingham, WA 98225



NVL Batch # 2420722.00

RE: Total Metal Analysis
Method: EPA 7000B Lead by FAA <paint>
Item Code: FAA-02

Client Project: Skagit Co. Facilities Concrete Community Center
Location: 45821 Railroad Street Concrete, WA

Dear Mr. Davis,

NVL Labs received 4 sample(s) for the said project on 11/14/2024. Preparation of these samples was conducted following protocol outlined in EPA 3051/7000B , unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with EPA 7000B Lead by FAA <paint>. The results are usually expressed in mg/Kg and percentage (%). Test results are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more detail.

At NVL Labs all analyses are performed under strict guidelines of the Quality Assurance Program. If samples were collected by the customer, then the reported test results apply only to the samples as received by NVL Labs. This report is considered highly confidential and will not be released without your approval. Samples are archived after two weeks from the analysis date. Please feel free to contact us at 206-547-0100, in case you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'Shalini Patel'.

Shalini Patel, Manager Metals/Org Laboratory

Enc.: Sample results



Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Analysis Report

Total Lead (Pb)



Client: All4 LLC
Address: 228 E Champion St #101
Bellingham, WA 98225

Batch #: 2420722.00

Matrix: Paint
Method: EPA 3051/7000B

Client Project #: Skagit Co. Facilities Concrete Community

Date Received: 11/14/2024

Samples Received: 4

Samples Analyzed: 4

Attention: Mr. Thomas Davis

Project Location: 45821 Railroad Street Concrete, WA

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
24124533	Paint-1	0.1980	51	< 51	<0.0051
24124534	Paint-2	0.2087	48	< 48	<0.0048
24124535	Paint-3	0.2113	47	55	0.0055
24124536	Paint-4	0.1437	70	< 70	<0.0070


Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 11/15/2024

Date Issued: 11/20/2024


Shalini Patel, Manager Metals/Org Laboratory

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2024-1115-06

FAA-02

LEAD LABORATORY SERVICES



Company All4 LLC **NVL Batch Number** 2420722.00
Address 228 E Champion St #101 **TAT** 5 Days **AH** No
 Bellingham, WA 98225 **Rush TAT**
Project Manager Mr. Thomas Davis **Due Date** 11/21/2024 **Time** 1:45 PM
Phone (360) 752-9571 **Email** tdavis@all4inc.com
Cell (253) 906-6648 **Fax** (360) 752-9573

Project Name/Number: Skagit Co. Facilities _____ **Project Location:** 45821 Railroad Street Concrete, WA _____
 Concrete Community _____
 Center _____

Subcategory Flame AA (FAA) _____
Item Code FAA-02 _____ EPA 7000B Lead by FAA <paint> _____

Total Number of Samples 4 _____ **Rush Samples** _____

	Lab ID	Sample ID	Description	A/R
1	24124533	Paint-1		A
2	24124534	Paint-2		A
3	24124535	Paint-3		A
4	24124536	Paint-4		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	UPS				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	11/14/24	1345
Analyzed by	Yasuyuki Hida		NVL	11/15/24	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions: _____

Date: 11/14/2024
 Time: 3:32 PM
 Entered By: Kelly AuVu



METALS CHAIN OF CUSTODY

Turn Around Time

- 2 Hour 4 Hours 24 Hours
- 2 Days 3 Days 4 Days
- 5 Days 6-10 Days

Please call for TAT less than 24 Hours

Company All4 Inc.
 Address 228 E Champion #101
Bellingham, WA 98225
 Phone (360) 752-9571

Project Manager Thom Davis
 Cell (253) 906 - 6648
 Email tdavis@whatcom-es.com
 Fax () -

Project Name/Number Skagit Co. Facilities: Concrete Community Center Project Location 45821 Railroad Street Concrete, WA

- | | | | | | | |
|--|---|---|---|-------------------------------|--|--------------------------------------|
| <input checked="" type="checkbox"/> Total Metals | <input checked="" type="checkbox"/> FAA (ppm) | <input type="checkbox"/> Air Filter | <input checked="" type="checkbox"/> Paint Chips (%) | <input type="checkbox"/> Soil | RCRA 8 | RCRA 11 |
| <input type="checkbox"/> TCLP | <input type="checkbox"/> ICP (PPM) | <input type="checkbox"/> Paint Chips (cm) | <input type="checkbox"/> Dust Wipes | | <input type="checkbox"/> Barium <input type="checkbox"/> Chromium <input type="checkbox"/> Silver | <input type="checkbox"/> Copper |
| | <input type="checkbox"/> GFAA (ppb) | <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Waste Water | | <input type="checkbox"/> Arsenic <input type="checkbox"/> Mercury <input checked="" type="checkbox"/> Lead | <input type="checkbox"/> Zinc |
| | <input type="checkbox"/> CVAA (ppb) | <input type="checkbox"/> Other _____ | | | <input type="checkbox"/> Selenium <input type="checkbox"/> Cadmium | <input type="checkbox"/> Other _____ |

Reporting Instructions _____
 Call () - Fax () - Email _____

Total Number of Samples _____

Sample ID	Description	A/R
1	Paint-1	
2	Paint-2	
3	Paint-3	
4	Paint-4	
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Print Name	Signature	Company	Date	Time
Sampled by <u>Thom Davis</u>		<u>All4 Inc.</u>	<u>Nov. 12, 2024</u>	<u>1555</u>
Relinquish by				

Office Use Only

Print Name	Signature	Company	Date	Time
Received by <u>Keenan</u>		<u>huv</u>	<u>11/14/24</u>	<u>1345VPS</u>
Analyzed by				
Called by				
Faxed/Email by				

SECTION 00 41 00

BID FORM

Bidder's Firm Name: _____ Date: _____

Address: _____

Telephone No.: _____

TO: Skagit County
Board of Commissioners
1800 Continental Place, Suite 100
Mount Vernon, WA 98273

Gentlemen and Ladies:

The undersigned having carefully examined the Bid Documents entitled "Skagit County Concrete Community Center TI", dated February 18th, 2025 and having visited the site and examined the conditions affecting the Work, hereby submits the following proposal:

The Undersigned proposes to furnish all labor, materials, services and incidentals to perform all work necessary for the completion of the Work described in the Call for Bids and associated specifications for the following Stipulated Sum for each bid item:

BASE BID:

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the contract documents and based upon the bid price for fully completed work as included in the proposal and the Lump Sum Bid Price represents a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type of work called for in these contract documents.

The following prices shall include all materials, labor, tools and equipment without sales tax where shown. The bidders shall include the cost of the mobilization and general conditions within each separate bid item. The amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.

Skagit County Prosecutors TI Base Bid

Total \$ _____

DOLLARS

(Please print dollar amount in words in space above for base bid not including sales tax.)

SALES TAX

The Undersigned certifies that the above-named construction costs do not include Washington State and Local Sales Taxes applicable to Skagit County as applied to materials and labor which will become a permanent part of the Work. All other Sales and Use Taxes properly levied by the State of Washington and Local Agencies on labor, materials, and equipment utilized on a temporary basis shall be included in the proposed amounts.

CONTRACT PROVISIONS

If the Undersigned is notified of the acceptance of this proposal within 45 days from the date set for the opening thereof, or at any time thereafter before this proposal is withdrawn, the undersigned agrees to execute a contract for the above Work for the above-named compensation in the required Form of Agreement containing the following provisions and to furnish the required bonds.

1. Time of Completion: The Undersigned agrees if awarded the Contract, to mobilize on site within 45 days of contract execution, be Substantially Complete within one hundred twenty (120) consecutive calendar days after the Notice to Proceed and reach Final Completion of the Work within (60) sixty consecutive calendar days thereafter.
2. Liquidated Damages: The Undersigned agrees that time is of the essence of this Contract and acknowledges that the amounts of damages specified are a measure of the damages which the Owner will sustain should the Undersigned fail to complete the Work within the Contract Time. Liquidated damages shall be Five Hundred Dollars (\$500.00) per calendar day for failure to substantially complete the work within the time specified and (\$500.00) per day thereafter for each consecutive calendar day that final completion is delayed.

BID GUARANTEE

The Undersigned agrees that the check or bid bond accompanying this proposal which amount is not less than 5 percent of the bid proposed, is left in escrow with the Owner, that the amount of the check, or penal sum of the bond, is the measure of damages which the Owner will sustain by failure of the Undersigned to execute said Contract and furnish required bonds, and that if the Undersigned fails to deliver said documents within 10 days after receipt of notice of award to him, the check shall become the property of the Owner and the bond shall remain in full effect. But if this proposal is not accepted within 45 days after the time set for the opening of bids, then the check shall be returned and the bond shall become void.

NON-COLLUSION CERTIFICATE

The Undersigned, being duly sworn, deposes and says that the person, firm, associated, co-partnership or corporation herein named, has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in the preparation and submission of this proposal to the Skagit County Board of County Commissioners for consideration in the award of the contract.

ADDENDA

Receipt of Addenda numbered ____ ____ ____ is hereby acknowledged.

PREVAILING WAGES

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date February 18th 2025, the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Bidder’s Business Name

Signature of Authorized Official*

Printed Name

Title

Date

City

State

Check One:

Sole Proprietorship Partnership Joint Venture Corporation

State of Incorporation, or if not a corporation, State where business entity was formed:

If a co-partnership, give firm name under which business is transacted:

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

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

Notary Public in and for the State of
Washington, residing in
Washington.

END OF SECTION

SECTION 00 43 13

BID SECURITY FORM

PART 1 - GENERAL

- A. The "Bid Bond", AIA Document A310, 2010 Edition, is a part of these Contract Documents and is incorporated as fully as if bound herein.
- B. The Bid Bond Form may be obtained from the Architect's office, or from the American Institute of Architects, 1735 New York Avenue NW, Washington D.C. 20006 as follows:
 - 1. <https://aiacontracts.com>
- C. Contractor may use their standard bid security form as acceptable substitution.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 00 43 36

PROPOSED SUBCONTRACTOR FORM

Bidder's Name: _____ Date: _____

Project Name: _____

Named subcontractors must have a reputation of competency in their respective fields of work. Contractor assumes responsibility for quality of work performed by their selected subcontractors. If a category of work will not be subcontracted bidder must list themselves. Subcontractor listings shall be due no later than (1) one hour after bid opening.

Designated Work

Firm Name

- | | |
|---------------------------------|-------|
| 1. Kitchen Hood and Associated: | _____ |
| 2. Gypsum Board Assemblies: | _____ |
| 3. Flooring: | _____ |
| 4. Plumbing: | _____ |
| 5. Electrical: | _____ |
| 6. HVAC: | _____ |
| 7. Aluminum Storefront: | _____ |

Bidder's Signature

Date

END OF SECTION

SECTION 00 43 93

BID SUBMITTAL CHECKLIST

The bidder's attention is called to this list of submittals, which is provided for the convenience of the bidders. This checklist does not include full details for submittals or bidder responsibilities that can be found in other sections of this project manual.

A. **BID FORM:** The bid prices must be shown in the spaces provided, and any addenda must be acknowledged on the Bid Form where space is provided. Filled in its entirety, signed by the bidder, and submitted at time of bid submission.

B. **BID SECURITY FORM:** This form is to be executed by the bidder and the surety company unless bid is accompanied by a certified check. The amount of this bond shall not be less than five percent (5%) of the total amount of the bid and may be shown in dollars or on a percentage basis. To be submitted with bid proposal.

C. **BIDDERS' QUALIFICATIONS:** To be filled out in its entirety and submitted with the bid form at time of bid submission.

D. **BIDDERS' RESPONSIBILITY CRITERIA **SUBMIT WITH BID:** There are numerous forms and information contained within this section. Special attention is called to the Bidder to fill out, sign and provide all forms and information requested at the time of bid submission.**

1. Documentation confirming Contractor has been in business at least 5 years in WA
2. Certification Regarding Debarment Suspension or Ineligibility
3. Supplemental Bidder Responsibility (notarized)
4. Copy of standard subcontract form for Owner review
5. A list of prevailing wage complaints filed against Contractor within 5 years
6. List of any willful and/or serious safety violations
7. Details on at least one project of similar size and scope completed within 5 years

Submitted no later than 10 days after bid opening by two lowest bidders:

1. Public Works Projects completed within 3 years with specified details
 - a. At least 3 projects for a Federal, State, or local governmental agency

E. **SUBCONTRACTOR LISTING:** Submit all subcontractors, and work categories listed on form attached, **within (1) one hour after specified time of bid opening.**

The following forms are to be executed after the contract is awarded:

- A. CONTRACT: This agreement to be signed by the successful bidder.
- B. PERFORMANCE BOND: One hundred percent of the Contract Price to be executed by the successful bidder and their surety company. The surety on such bonds shall be a duly authorized surety company satisfactory of the Owner.
- C. PAYMENT (LABOR MATERIALS AND TAXES) BOND: One hundred percent of the Contract Price to be executed by the successful bidder and their surety company. The surety on such bonds shall be a duly authorized surety company satisfactory of the Owner.
- D. RETAINAGE INVESTMENT OPTION: This agreement to be executed by the successful bidder.
- E. CONTRACTOR'S CERTIFICATION: Concerning Labor Standards and Prevailing Wage Requirements. Submit Statement of Intent to Pay Prevailing Wages. (Form F 700-029-000, available at Offices of Washington State Department of Labor and Industries).

END OF SECTION

SECTION 00 45 00

BIDDER'S QUALIFICATIONS

Each bidder submitting a proposal for this Project shall submit, as part of its bid, the following information:

1. Name of Bidder: _____

2. Business Address: _____

3. Telephone Number and Area Code: _____

4. IRS Federal Employer's Identification Number: _____

5. Current State Unified Business Identification Number: _____

6. Number of years engaged in the contraction business under the present firm name: _____

7. Total value of contracts in force: _____

8. General description of work for which Bidder is qualified: _____

9. Recent significant project completed by Bidder including owner's name, approximate cost, and completion date:

1. _____

2. _____

3. _____

4. _____

10. Major equipment owned by the Bidder:

1. _____
2. _____
3. _____
4. _____

11. Bank Reference: _____

12. Washington State Contractor Registration Number: _____

13. Bonding Reference: _____

14. Bonding Capacity: _____

Bidder:

By: _____ Title: _____ Date: _____

END OF SECTION

SECTION 00 45 49

BIDDER RESPONSIBILITY CRITERIA

The following checklist is to be used in documenting that a Bidder meets the mandatory bidder responsibility criteria found in RCW 39.04.350 for public works contracting. **Print a copy of documentation** from the appropriate website, attach it to this checklist and keep in the contract file.

Bidder’s Business Name: _____

Other names the business operates under? _____

Registration and Licensure

Use the *following link* to verify responsibility criteria in each area listed below.

– **Contractor Registration** – <https://secure.lni.wa.gov/verify/>

General Contractor License Number: _____ Effective Date: _____ (RCW 18.27)
Expiration Date: _____ Status: Active: – Yes – No

Specialty Licenses (*based on the scope of the work**)

Plumbing (RCW 18.106) _____

Electrician (RCW 19.28) _____

Asbestos _____

**If the work includes a scope that is required to be performed by a licensed professional, but the prime contractor is going to subcontract to a specialty subcontractor, place “subcontracted” in the line. If not subcontracted, the OWNER assumes the prime is self-performing and must have a current specialty license.*

If the work contains scopes of plumbing, elevator, or electrical work is it the best practice to require the firm to have the licensed professional named with their bid so responsibility can be recorded prior to award, even if subcontracted.

WA UBI: _____ Account Status: – open – closed*

*If the account is closed, the contractor will need to reopen an account prior to the award being issued.

Debarment and Violation Status

Washington State Eligibility to Bid _____ Yes ___ No*

(Check the Contractors Not allowed to bid list: <https://lni.wa.gov/licensing-permits/public-works-projects/strike-and-debar/contractors-not-allowed-to-bid>)

*If the contractor appears on the list of contractors not allowed to be they are not responsible, and their bid will need to be rejected in writing.

Federal Systems of Awards Management (SAM.gov) Entity Registration or Unique Entity ID
Does Bidder have an **“Active Exclusion Record”** Yes ___ No ___

Training and Compliance (can find as part of the L&I contractor registration

<https://secure.lni.wa.gov/verify/> _____

Industrial Insurance Coverage: ___No ___Yes Account Number:
Required Public Works Training: ___Yes ___No ___Doesn't Apply
Per RCW 39.04.350 and RCW 39.06.020, has contractor had L&I training or meet exemption? _Yes ____No
Prevailing Wage Compliance (wage payment violations within 3 years) (RCW 39.04.350 (1)(g)) _Yes ____No
Sworn statement or verification form received acknowledging compliance? _____Yes _____No
Employment Security Department Number: _____
State Excise Tax Registration Number: _____ Account Status: _____open _____closed https://secure.dor.wa.gov/gteunauth/#2

Low Responsible Bidder

It is the intent of the Owner to award a contract to the low responsible bidder. In determining the bidder's responsibility, the Owner shall consider an overall accounting of the items listed below. The bidder must submit the following information, demonstrating that they meet the listed criteria:

1-02 Bid Procedures and Conditions

1-02.1 Qualifications of Bidder

A. Bidders must meet the minimum qualifications of RCW 39.04.350, as amended:

"Before award of a public works contract, a bidder must meet the following responsibility criteria to be considered a responsible bidder and qualified to be awarded a public works project. The bidder must:

- (a) At the time of bid submittal, have a certificate of registration in compliance with chapter 18.27 RCW;
- (b) Have a current State unified business identifier number;
- (c) If applicable, have industrial insurance coverage for the bidder's employees working in Washington as required in Title 51 RCW; an employment security department number as required in Title 50 RCW; and a State excise tax registration number as required in Title 82 RCW; and
- (d) Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).
- (e) If bidding on a public works project subject to the apprenticeship utilization

requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one- year period immediately preceding the date of the bid solicitation; and

- B. In addition to the bidder responsibility criteria above, the bidder must also meet the following relevant supplemental bidder responsibility criteria applicable to the project:
- a. The Bidder shall not currently be debarred or suspended by the Federal government. The Bidder shall not be listed as a current debarred or suspended bidder on the U.S. General Services Administration's "Excluded Parties List System" website. Bidder debarment or suspension status may be verified through this website: <http://www.epls.gov/>. The Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with this criteria.
 - b. The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue, without a payment plan approved by the Washington State Department of Revenue. The Bidder shall not be listed on the Washington State Department of Revenue's "Delinquent Taxpayer List", which may be verified at the following website: <http://dor.wa.gov/content/fileandpataxes/latefiling/dtlwest.aspx>. The Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.
 - c. The Bidder shall not have been convicted of a crime involving bidding on a public works contract within five (5) years prior to the bid submittal deadline. The Bidder shall provide a duly executed sworn statement (on the included form, or on a form otherwise determined to be acceptable by the Owner), that the Bidder has not been convicted of a crime involving bidding on a public works contract. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.
 - d. The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established written procedure which the Bidder uses to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" contractors as defined per RCW 39.06.020. The Bidder shall submit a copy of its standard subcontract form for review by the Owner, a written description of the Bidder's procedure for validating the responsibility of the subcontractors with which the Bidder contracts, and a duly executed sworn statement (on the included form, or in a form otherwise determined to be acceptable by the Owner) that the Bidder has properly made a determination of responsibility for all subcontractors for the project. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance

with this supplemental criteria.

- e. The Bidder shall not have a record of prevailing wage complaints filed against the Bidder within five (5) years prior to the bid submittal date that demonstrates a pattern of failing to pay workers prevailing wages, unless there are extenuating circumstances that are acceptable to the Owner. The Bidder shall submit a list of prevailing wage complaints filed against it within five (5) years of the bid submittal date along with a written explanation of each complaint, and how it was resolved. The Owner shall evaluate the explanations provided by the Bidder (and the resolution of each complaint) to determine whether the complaints demonstrate a pattern of the Bidder failing to pay its workers prevailing wages as required. The Owner may also evaluate complaints filed within the time period specified that were not reported by the Bidder. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.
- f. The Bidder shall not have had any public works contract terminated for cause by a government agency during the five (5) year period immediately preceding the bid submittal deadline for the project, unless there are extenuating circumstances acceptable to the Owner. The Bidder shall provide a duly executed sworn statement (on the included form, or in a form otherwise determined to be acceptable by the Owner), that the Bidder has not had any public works contract terminated for cause by a government agency during the five (5) year period immediately preceding the bid submittal deadline for the project. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.
- g. The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects within three (3) years of the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances which are acceptable to the Owner. The Bidder shall submit a list of all public works projects that the Bidder has completed within the previous three (3) years prior to the bid submittal date, and include for each project the following information:
 - i. The owner for each public works project, and contact information for each owner.
 - ii. A list of claims filed against the retainage and/or payment bond(s) for each of the public works project.
 - iii. A written explanation of the circumstances surrounding each claim against the retainage and/or payment bond(s), and an explanation as to the ultimate resolution of each claim.

The Owner may contact other previous owners to validate the information provided by the Bidder. The Owner may also use independent sources of

information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.

- h. Within five (5) years prior to the bid submittal date the Bidder must have completed a minimum of at least three (3) other projects for a Federal, State, or local governmental agency. The Bidder shall provide the following information pertaining to these three (3) projects:
 - i. The contact information for the Federal, State, or local contracting agency for whom the project was completed;
 - ii. Description of the project;
 - iii. Start and completion dates for the project;
 - iv. Awarded contract amount;
 - v. Final contract amount;
 - vi. Other additional information or documentation pertaining to the projects as may be requested by the Owner.

The Owner may contact other previous owners to validate the information provided by the Bidder. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.

- i. **The Bidder shall have been duly incorporated and actively doing business in the State of Washington for a minimum of at least five (5) years prior to the bid submittal date. The Bidder shall provide the Owner with a adequate documentation confirming that the Bidder has been duly incorporated and actively doing business in the State of Washington for a minimum of at least five (5) years prior to the bid submittal date, including, but not necessarily limited to, documentation from the Washington State Secretary of State's Office.** Such documentation shall include, but is not necessarily limited to, a copy of the Bidder's Certificate of Existence / Authorization, a copy of the Bidder's Certificate of Incorporation / Formation / Authority, a certified copy of the Bidder's Original Registration Document (i.e., Articles of Incorporation, Certificate of Authority, Certificate of Formation, or Foreign Limited Liability Registration), and any other supporting information or documentation as may otherwise be requested by the Owner (including, but not necessarily limited to, copies of the Bidder's business licenses and contractor's licenses for the previous five [5] years prior to the bid submittal date). The Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.
- j. Within two (2) years prior to the bid submittal date the Bidder shall not have received any willful safety violations, and the Bidder shall not have received more than two (2) serious safety violations (i.e., WISHA / OSHA written

citations) from the Washington State Department Labor & Industries or analogous agency with jurisdiction in the location the work was performed, regardless of whether such willful and/or serious safety violations have been abated or not. The Bidder shall provide Owner with a list of any and all willful and/or serious safety violations (i.e., WISHA / OSHA written citations) from the Washington State Department Labor & Industries (or analogous agency with jurisdiction in the location the work was performed), regardless of whether such willful and/or serious safety violations have been abated or not. The Owner may verify such information provided with the Washington State Department Labor & Industries or analogous agency with jurisdiction in the location the work was performed. The Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with this supplemental criteria.

- k. Within five (5) years prior to the bid submittal date the Bidder shall have successfully completed at least one (1) other project of a similar size and scope as required by the contract documents for this project. The project must have had a total construction cost of at least \$2,000,000. In evaluating whether the other project(s) was/were “successfully completed,” the Owner may verify previous owner references for the previous project(s), and may evaluate the previous owner’s assessment of the Bidder performance, including but not limited to the following areas:
- i. Quality control;
 - ii. Safety record;
 - iii. Timeliness of performance;
 - iv. Use of skilled personnel;
 - v. Management of subcontractors;
 - vi. Availability of and use of appropriate equipment;
 - vii. Compliance with contract documents;
 - viii. Management of submittals process, change orders, and close-out.
 - ix. Construction within occupied area.

For the purposes of meeting this criterion, the Owner has determined that “similar size and scope” to this project means project(s) that have the following characteristics: (i) The awarded project(s) contract amount must have been of not less than \$500,000; (ii) The project(s) must have included the renovation in excess of 2,000 square feet; and (iii) The project(s) must have included construction of within the occupied business spaces. The Bidder shall submit a list of other project(s) of similar size and scope to this project or larger, including information on a minimum of at least one (1) project of similar size and scope to this project or larger completed within five (5) years prior to the

bid submittal date. The information about each project shall include the following:

1. Owner's name and contact information for the owner's representative;
 2. Awarded contract amount;
 3. Final contract amount;
 4. A description of the scope of the project and how the project is similar to this project;
 5. The Bidder's assessment of its performance of each project, including but not limited to the following:
 - a. Quality control;
 - b. Safety record;
 - c. Timeliness of performance;
 - d. Use of skilled personnel;
 - e. Management of subcontractors;
 - f. Availability of and use of appropriate equipment;
 - g. Compliance with contract documents;
 - h. Management of submittals process and change orders.
 - i. Construction within occupied areas.
- C. All Bidders must supply and provide the forgoing described bidder responsibility information, documentation, and materials to the satisfaction of the Owner. If a Bidder fails to supply the required bidder responsibility documentation, information, or materials, then Bidder may be determined by the Owner to be non-responsive, and the bid may be rejected on this basis. If the Owner determines the bidder does not meet the bidder responsibility criteria above and is therefore not a responsible bidder, the Owner shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees with this determination, it may appeal the determination within twenty four (24) hours of receipt of the Owner's determination by presenting additional written information to the Owner. The Owner will consider the additional information before issuing its final determination. If the Owner's final determination affirms that the bidder is not responsible, the Owner will not execute a contract with any other bidder until two (2) business days after the bidder determined to be not responsible has received the final determination. Please note that the above-described information, materials, and documentation requested by the Owner for purposes of determining Bidder responsibility is not necessarily exclusive, and the Owner expressly reserves the right

to request additional information, materials, and documentation as may be determined to be necessary or desirable by the Owner in order to evaluate and determine Bidder's compliance with the above-described bidder responsibility criteria. At all times, the Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with the forgoing bidder responsibility criteria.

D. Certification Regarding Debarment Suspension or Ineligibility:

Notice: FAILURE TO RETURN THIS CERTIFICATION AS PART OF YOUR BID MAY CONSTITUTE GROUNDS FOR A NONRESPONSIVE BID AND MAY RENDER YOUR FIRM INELIGIBLE FOR AWARD.

The Contractor certifies by signing this Agreement that Contractor is not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participating in this contract by any federal department or agency. Further, Contractor agrees not to enter into any arrangements or contracts related to this contract with any party that is on the "General Service Administration List of Parties Excluded from Federal Procurement or Non-procurement Programs" at <http://epls.arnet.gov/>.

CONTRACTOR:

Authorizing Signature

Date

Federal Tax ID#: _____

Contractor Lic.#: _____

This form is to be submitted by the bidder with his bid.

SUPPLEMENTAL BIDDER RESPONSIBILITY - DECLARATION OF BIDDER

Notice: FAILURE TO RETURN THIS CERTIFICATION AS PART OF YOUR BID MAY CONSTITUTE GROUNDS FOR A NONRESPONSIVE BID AND MAY RENDER YOUR FIRM INELIGIBLE FOR AWARD.

In accordance with the Contract Provisions and Plans the Bidder must provide the following sworn statement relevant to the supplemental bidder responsibility applicable to the project.

Name of Bidder: _____

Address: _____

Telephone No.: _____

E-Mail: _____

I, _____, the undersigned declarant, as the duly authorized representative on behalf of _____ (herein the "Bidder") hereby make this declaration on the basis of facts within the scope of my firsthand knowledge and authority to which I am competent to testify:

1. I hereby certify, swear, and affirm under penalty of perjury, that the Bidder has not been convicted of a crime involving bidding on a public works contract within the five (5) year period immediately preceding the bid submittal deadline for the project; and
2. I hereby certify, swear and affirm under penalty of perjury, that as of the date of this declaration (below), that the Bidder has hereby made a proper determination of bidder responsibility for all subcontractors for the project in accordance with the terms of RCW 39.06, RCW 39.04.350, and in accordance with the terms of the Bidder's written procedure for validating the responsibility of all subcontractors for the project with which the Bidder contracts; and
3. I hereby certify, swear and affirm under penalty of perjury, that the Bidder, has not had any public works contract terminated for cause by any State, Federal, or local government agency during the five (5) year period immediately preceding the bid submittal deadline for the project.

This form is to be submitted by the bidder with his bid.

Signed under penalty of perjury under the laws of the State of Washington this ____ day of _____, 2024, at _____, Washington.

Name of Bidder: _____

By: _____

Print Name: _____

Title: _____

STATE OF WASHINGTON

ss.

COUNTY OF _____

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was duly authorized execute the instrument and acknowledged it as the _____ of _____, to be the free and voluntary act of such party for the uses and purposes herein mentioned.

DATED this ____ day of _____, 2024.

(SEAL)

Notary Public
print name: _____
Residing at _____
My commission expires _____

END OF SECTION

This form is to be submitted by the bidder with his bid.

Summary of Required Submittals with Bid

1-02.1, B., d.

.....”The Bidder shall **submit a copy of its standard subcontract form for review by the Owner, a written description of the Bidder’s procedure for validating the responsibility of the subcontractors with which the Bidder contracts**, and a duly executed sworn statement (on the included form, or in a form otherwise determined to be acceptable by the Owner) that the Bidder has properly made a determination of responsibility for all subcontractors for the project....”

The information above is to be submitted by the bidder with his bid.

1-02.1, B., e.

“.....The Bidder shall submit a list of prevailing wage complaints filed against it within five (5) years of the bid submittal date along with a written explanation of each complaint, and how it was resolved....”

The information above is to be submitted by the bidder with his bid if applicable. If no complaints have been filed against the bidder, so state on paper, reference this section and submit with bid.

1-02.1, B., g.

“.....The Bidder shall submit a list of all public works projects that the Bidder has completed within the previous three (3) years prior to the bid submittal date, and include for each project the following information:

- i. The owner for each public works project, and contact information for each owner.
- ii. A list of claims filed against the retainage and/or payment bond(s) for each of the public works project.
- iii. A written explanation of the circumstances surrounding each claim against the retainage and/or payment bond(s), and an explanation as to the ultimate resolution of each claim...”

The information above is to be submitted by the bidder with his bid.

1-02.1, B., h.

“....Within five (5) years prior to the bid submittal date the Bidder must have completed a minimum of at least three (3) other projects for a Federal, State, or local governmental agency. The Bidder shall provide the following information pertaining to these three (3) projects:

- iv. The contact information for the Federal, State, or local contracting agency for whom the project was completed;

- v. Description of the project;
- vi. Start and completion dates for the project;
- vii. Awarded contract amount;
- viii. Final contract amount;
- ix. Other additional information or documentation pertaining to the projects as may be requested by the Owner....”

The information above is to be submitted by the bidder with his bid.

1-02.1, B., i.

“.....The Bidder shall provide the Owner with adequate documentation confirming that the Bidder has been duly incorporated and actively doing business in the State of Washington for a minimum of at least five (5) years prior to the bid submittal date, including, but not necessarily limited to, documentation from the Washington State Secretary of State’s Office. Such documentation shall include, but is not necessarily limited to, a copy of the Bidder’s Certificate of Existence / Authorization, a copy of the Bidder’s Certificate of Incorporation / Formation / Authority, a certified copy of the Bidder’s Original Registration Document (i.e., Articles of Incorporation, Certificate of Authority, Certificate of Formation, or Foreign Limited Liability Registration), and any other supporting information or documentation as may otherwise be requested by the Owner (including, but not necessarily limited to, copies of the Bidder’s business licenses and contractor’s licenses for the previous five [5] years prior to the bid submittal date)...”

The information above is to be submitted after the bid opening by the (2) two low bidders within 10 days of the bid opening.

1-02.1, B., j.

“.....The Bidder shall provide Owner with a list of any and all willful and/or serious safety violations (i.e., WISHA / OSHA written citations) from the Washington State Department Labor & Industries (or analogous agency with jurisdiction in the location the work was performed), regardless of whether such willful and/or serious safety violations have been abated or not...”

The information above is to be submitted by the bidder with his bid if applicable. If no safety violations have been filed against the bidder, so state on paper, reference this section and submit with bid.

1-02.1, B., k.

“....The Bidder shall submit a list of other project(s) of similar size and scope to this project, including information on a minimum of at least one (1) project of similar size and scope to this project completed within five (5) years prior to the bid submittal date. The information about each project shall include the following:

1. Owner’s name and contact information for the owner’s representative;
2. Awarded contract amount;
3. Final contract amount;

4. A description of the scope of the project and how the project is similar to this project;
5. The Bidder's assessment of its performance of each project, including but not limited to the following:
 - a. Quality control;
 - b. Safety record;
 - c. Timeliness of performance;
 - d. Use of skilled personnel;
 - e. Management of subcontractors;
 - f. Availability of and use of appropriate equipment;
 - g. Compliance with contract documents; Management of submittals process and change orders...."

1-02.1, D.

A. Certification Regarding Debarment Suspension or Ineligibility:

The information above is to be submitted by the bidder with his bid.

SECTION 00 52 00

AGREEMENT FORM

PART 1 - GENERAL

- A. A modified version of the "Standard Form of Agreement Between Owner and Contractor", AIA Document A101, 2017 Edition, is a part of these Contract Documents and is incorporated as fully as if bound herein.
- B. The original Agreement Form may be obtained from the Architect's office, or from the American Institute of Architects, 1735 New York Avenue NW, Washington D.C. 20006; Seattle Chapter, American Institute of Architects, 1911 First Avenue, Seattle, WA 98101; and Northwest Washington Chapter, American Institute of Architects as follows:
 - 1. <https://aiacontracts.org>
- C. Modifications to AIA Document A101, 2017 edition are included in the invitation to bid documents.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DRAFT 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 2025
(In words, indicate day, month and year.)

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

Skagit County, a Municipal Corporation
1800 Continental Place,
Mount Vernon, WA 98273

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

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

Concrete Community Center
45821 Railroad Street
Concrete, WA 98237

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

Carletti Architect, P.S.
116 E Fir Street, Suite A
Mount Vernon, WA 98273

The Owner and Contractor agree as follows.

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.

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

The parties should complete A101®-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

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 RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT 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.

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:

(Check one of the following boxes.)

- [« »] 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. All float contained in the Construction Schedule shall belong to both Owner and Contractor.

§ 3.3 Substantial Completion

§ 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.)

[] Not later than () 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
<input type="text"/>	<input type="text"/>

§ 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
<input type="text"/>	<input type="text"/>

§ 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 for Acceptance
<input type="text"/>	<input type="text"/>	<input type="text"/>

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

Item	Price
<input type="text"/>	<input type="text"/>

§ 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)
<input type="text"/>	<input type="text"/>	<input type="text"/>

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

N/A. Owner shall be entitled to actual damages. In addition, if the Contractor fails to achieve Substantial Completion by the Scheduled Substantial Completion date. Contractor shall be liable to the Owner for any and all additional delay costs associated with mitigation to prevent water intrusion and water damage.

§ 4.6 Other:

N/A

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

←N/A→

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 Documents.

§ 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 ~~last~~ day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the ~~twentieth~~ (20th) day of the ~~following~~ month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than ~~forty-five~~ (~~45~~) 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 may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 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.)

«»
Five percent (5%)

§ 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.)

«N/A»

§ 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.)

«N/A»

§ 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. [Reserved]~~

§ 5.1.9 Except with the Owner's prior written 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 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:

« »

§ 5.3 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.)

« »%« »
Six percent (6%) per annum.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker~~Reserved~~

~~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 a 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
- Litigation in a court of competent jurisdiction. Venue of litigation shall be the Superior Court of Skagit County. This Agreement is governed by the laws of the State of Washington. The prevailing party, as determined by the Court, shall be entitled to recover their reasonable attorney fees and costs, including on appeal.
- 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.)

~~↔
N/A, there shall be no fee for the Owner’s termination for 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)

~~↔
↔
↔~~

↔ Eric Peterson
Skagit County Facilities Management
1800 Continental Place
Mount Vernon, WA 98273
epeterson@co.skagit.wa.us
360-416-1176

↔
↔
↔
↔
↔
↔

§ 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 written notice to the other party.

§ 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~~, the Specifications and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

<>

§ 8.7 Other provisions:

<>

§ 8.7.1 Miscellaneous Provisions:

- .1 Contractor hereby warrants and represents that it is a duly licensed contractor under the laws of the state in which the Project is located and that its contractor's license number is <license #>.
- .2 All notices to be given hereunder shall be in writing and may be given or served (i) by the depositing of same in the United States Mail, addressed to the party to be notified, postage paid and registered or certified with return receipt requested, (ii) by delivering the same in person, (iii) by recognized overnight delivery service, such as Federal Express, or (iv) by email as long as the recipient provides email confirmation of receipt of the email.

If to the Owner: Skagit County Facilities Management
1800 Continental Place
Mount Vernon, WA 98273

If to the Contractor:

.3 Indemnification. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the Owner, its officers, agents and employees (“Indemnified Parties”) from all claims, damages, losses, suites or actions and expenses, including but not limited to attorney fees, arising out of or resulting from the Contractor’s, subcontractors at any tier and agents performance or lack of performance of the Work provided that each claim, damage, loss or expense is attributable to (i) bodily injury, sickness, disease or death; (ii) injury to or destruction of property; (iii) breach of any provision in this Agreement and/or (iv) any third party claim against Owner arising out of Contractor’s Work or caused by or arises out of Contractor’s negligence. Contractor’s duty to indemnify and defend Owner shall survive any Contractor termination by Owner.

If any claim is caused or alleged to be caused in part by any joint or concurrent negligent act of omission by any of the Indemnified Parties, the Contractor shall indemnify, hold harmless and defend the Indemnified Parties from such claims only to the extent that such claim arises out of or resulting from the negligence of the Contractor and only in proportion to the negligence of the Contractor. In no event shall the Contractor be obligated to indemnify the Owner for claims which arise out of or result from the sole negligence of the Indemnified Parties.

For the sole purposed of giving full force and effect to the indemnification obligations under this Agreement, and not for the benefit of the Contractor’s employees or any third party, the Contractor specifically and expressly waives any immunity that may be granted to Contractor under the Washington State Industrial Insurance Act, Title 51 RCW for Contractor’s agents, employees, and subcontractors. This provision has been mutually negotiated between Owner and Contractor.

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 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

« »

.5 Drawings

Number	Title	Date
	<u>Concrete Community Center TI</u>	

.6 Specifications

Section	Title	Date	Pages
	<u>Concrete Community Center TI</u>		

.7 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.

.8 Other Exhibits:

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

AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

The Sustainability Plan:

Title	Date	Pages
Not applicable		

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
Not applicable			

.9 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.

OWNER (Signature)

←→←→ See attached signature sheet

(Printed name and title)

CONTRACTOR (Signature)

←→←→

(Printed name and title)

SECTION 00 61 00

BONDS AND CERTIFICATES

The bond and insurance requirements set forth on the following pages are required of the successful bidder.

1.01 **GENERAL:** In addition to the Bid Guarantee required in the advertisement, Skagit County requires the Contractor to furnish the following bonds and insurance. The inception date of the insurance coverage shall be the date the Contractor is ordered by Skagit County to proceed with the work and shall be maintained during the life of the Contract and for not less than one year thereafter.

1.02 **EVIDENCE OF COMPLIANCE:**

A. Performance, Labor and material Payment Bonds: Submitted at time of execution of the Contract and attached thereto.

B. Insurance: A Certificate of Insurance shall be filed with "Skagit County." This Certificate shall be reflective of all Insurance Coverage required by the County's contract documents. Any Certificate filed with the County found to be incomplete or not according to Form, will be returned as not satisfactory. Rejected Certificates shall be corrected as necessary and resubmitted to the county for approval. Certificates of Insurance shall indicate the following to be Additional Named Insureds:

In addition to the foregoing, the Certificate of Insurance must include a Cancellation Notification of not less than thirty (30) days. The Certificate should also contain the Contract Number and a "concise verbal definition" of the Contract to which the Certificate applies.

1.03 **INSURANCE GENERALLY:** The Contractor shall not commence work under this contract until he has obtained the insurance required hereunder and such insurance has been approved by the County. In like manner, the General Contractor shall not allow any subcontractor to commence work on any subcontract until the subcontractor has submitted to the General Contractor a Certificate of Insurance reflective of the coverage required by Skagit County. Skagit County's approval of insurance shall not relieve or decrease the Contractor's liability hereunder. Each policy shall contain an endorsement stating that the insurance company will not, prior to the completion of the Work or any expiration date shown on the policy and certificate, whichever occurs first, terminate the policy or change any coverage therein without first mailing, by registered mail, written notice of such action at least 30 days prior to the termination or change, to Skagit County.

1.04 **CONTRACTOR'S LIABILITY INSURANCE:** The insurance required, by Skagit County, is as specified below and in the amounts indicated:

A. Worker's Compensation and Employer's Liability Insurance: All employees of the Contractor and subcontractors shall be insured under Washington State Industrial Insurance. Employees not subject to the State Act shall be insured under Employer's

Liability with a \$2,000,000.00 limit of liability. A separate Certificate of Insurance shall be furnished to Skagit County if any of the Contractor's payroll is not reported to the Washington State Industrial Insurance. The contractor shall be responsible for confirming compliance of all subcontractors with the above requirements.

B. Comprehensive General Liability and Comprehensive Automobile Liability Insurance:
The Contractor shall obtain and retain Bodily Injury and Property Damage Liability Insurance providing the following:

1. Additional Insured: Skagit County, its employees, and Carletti Architects, P.S.. shall be named as additional insured for liability arising out of the work of this Contract as a result of the negligence, real or alleged, on the part of the contractor and his subcontractors.
2. Limits of Liability: Limits shall equal or exceed the combination or primary and excess limits for bodily injury and property damage liability of \$2,000,000.00 annual aggregate.
3. Coverage: Coverage shall be as is usual to the practice of the Insurance Industry; included but not limited to the following coverages:
 - a. Premises and Operations including Explosion, Collapse and Underground Liability;
 - b. Products and completed Operations;
 - c. Owners and Contractors Protective Liability;
 - d. Broad form Property Damage Liability;
 - e. Blanket Contractual Liability;
 - f. Personal Injury Liability, including coverage's A, B, and C;
 - g. Employers "Stop-Gap" Liability;
 - h. Automobile Liability for All Owned, Non-Owned, Hired Leased or Borrowed Vehicles;
 - i. Un-insured and Under-insured Motorist Coverage should also be in effect.
4. Products and Completed Operations Insurance: This coverage must be maintained for a period of not less than two years after the final acceptance of the work performed.

1.05 PROPERTY INSURANCE: Unless otherwise provided, the Contractor shall purchase and maintain property insurance upon the entire Work at the site to 115 percent of the full value thereof. This insurance shall include the interests of Skagit County, the Contractor and all subcontractors in the Work being performed. The coverage should be written on a "Builder's Risk" basis. All materials which are to be made part of the

construction project are to be so insured while being stored at or off the job site(s) and / or while being transported to and from the job site(s). Insurance against loss of tools, equipment, construction, or otherwise not to be incorporated into the Work is the responsibility of the Contractor and the cost of such insurance shall not be included in the cost of insurance required herein before.

- A. Endorsements: The policy shall be specifically endorsed as follows:
1. Payments: It is agreed that loss payments under the policy shall be made payable to Skagit County as trustee for each of the interests named in the policy.
- B. Waiver: Skagit County and the contractor waive all rights against (1) each other and the subcontractors, sub-subcontractors, agents and employees each of the other, and (2) the Owner for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to this Article or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by Skagit County, as trustee.

1.06 BONDS

- A. Performance and Payment Bonds: Furnish surety bond in the form of AIA Document A312 in an amount equal to 100 percent of the Contract Sum covering faithful performance of the work and payment of labor and materials. Furnish bonds issued by a bonding company licensed to transact business in the locality of the Work and approved by the Owner.

END OF SECTION

SECTION 00 61 13

PERFORMANCE BOND AND PAYMENT BOND

PART 1 - GENERAL

- A. The "Performance Bond and Payment Bond", AIA Document A312, 2010 Edition, is a part of these Contract Documents and is incorporated as fully as if bound herein.
- B. The Performance Bond and Payment Bond Form may be obtained from the Architect's office, or from the American Institute of Architects, 1735 New York Avenue NW, Washington D.C. 20006; Seattle Chapter, American Institute of Architects, 1911 First Avenue, Seattle, WA 98101; and Northwest Washington Chapter, American Institute of Architects as follows:
 - 1. <https://aiacontracts.org>
- C. Contractor may use their standard bid security form as acceptable substitution.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 00 62 00

CERTIFICATES OF INSURANCE

Certificates of Insurance Requirements:

1. Certificate shall be issued on an ACORD Form, or a form that meets with Skagit County's approval.
2. The Insuring Company shall have a Best Rating of A+ or meet with Skagit County's approval.
3. The minimum acceptable General Liability Limit shall be \$2,000,000 Aggregate / \$1,000,000 Occurrence. Coverage shall include owners & Contractors Protective Liability and Employers Liability (Stop-Gap) Coverage.

Coverage shall be written on an "Occurrence" Basis or meet with Skagit County's approval.

4. Automobile Coverage shall include "Any Auto" or "Scheduled Autos" and shall include Hired and Non-Owned Auto Liability.

The minimum acceptable Automobile Liability Limit shall be \$1,000,000.

5. Skagit County, it's Commissioners and Employees, and Interface Engineering., shall be added as Additional Insureds on the Certificate, and a separate endorsement shall be issued by the Company adding Skagit County, it's Commissioners and Employees, and Carletti Architects, P.S. as Additional Insured to the General Liability and Automobile Policy and the Umbrellas Excess Policy, where required to meet minimum limits outlined in #3 and #4 above.
6. The "Cancellation" Block shall be altered to include the wording "Should any of the above described policies be canceled or materially reduced before expiration date thereof, the issuing company will mail 30 days written notice to the certificate holder named to the left."

If there are any questions regarding these requirements please contact Skagit County's Risk Manager, Mary Houben, 360-416-1384.

END OF SECTION

SECTION 00 62 91

RETAINAGE INVESTMENT OPTION

Contractor: _____ Project Name: _____

Date: _____ Project Number: _____

Pursuant to RCW 60.28.010, as amended, you may exercise an option as to how retainage under this contract will be invested. Please complete and sign this form indicating your preference; if you fail to do so, the Owner will deposit funds in a Guarantee Deposit account, and you will miss the benefit of any interest earned. Select one of the following options:

- 1. Savings Account: Money will be placed in an interest bearing account. The interest will be paid to you directly, rather than kept on deposit. If you prefer a particular bank, state its name:

- 2. Escrow / Investments: The Owner will deliver retainage checks to a selected bank, pursuant to an escrow agreement. The bank will then invest the funds in securities or bonds selected by you, and interest will be paid to you as it accrues.

Preferred Bank: _____

Securities / Bonds: _____

- 3. Guarantee Deposit: Retainage will be deposited in a manner selected by the Owner. No interest is payable to the Contractor.

Retainage is normally released 30 days after final acceptance of the work, or following receipt of Labor and Industries/Department of Revenue clearance, whichever date is the later. Retainage on landscaping work may be retained longer, due to its seasonal nature. State law allows for limited early release in certain circumstances.

(Contractor's Signature)

Title

END OF SECTION

SECTION 00 72 00

GENERAL CONDITIONS

PART 1 - GENERAL

- A. A modified version of the "General Conditions of the Contract for Construction", AIA Document A201, 2017 Edition, is a part of these Contract Documents and is incorporated as fully as if bound herein.
- B. The General Conditions of the Contract for Construction document may be obtained from the Architect's office, or from the American Institute of Architects, 1735 New York Avenue NW, Washington D.C. 20006; Seattle Chapter, American Institute of Architects, 1911 First Avenue, Seattle, WA 98101; and Northwest Washington Chapter, American Institute of Architects as follows:
 - 1. <https://aiacontracts.org>
- C. Modifications to AIA Document A201, 2017 edition are included in the invitation to bid documents.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

DRAFT AIA® Document A201™ – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Skagit County Concrete Community Center TI
, WA 9827345821 Railroad Street, Concrete, WA 98237

↔

↔

THE OWNER:

(Name, legal status and address)

Skagit County, a Municipal Corporation
1800 Continental Place, Mount Vernon, WA 98273

↔↔↔

↔

THE ARCHITECT:

(Name, legal status and address)

Carletti Architects, P.S.
116 E Fir Street, Suite A, Mount Vernon, WA 98273

↔↔↔

↔

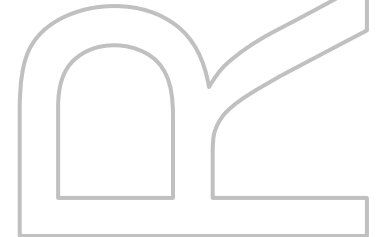
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ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well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

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.



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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

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 (General, Supplementary and other Conditions), Drawings, bid Specifications, the advertisement and/or invitation to bid, instructions to Bidders, 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 (4) 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, or the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements or the Contractor's bid. Any inconsistency within the Specifications and Drawings and/or other Contract Documents shall be interpreted as requiring the stricter standard and greatest measure of performance of the Contractor.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 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~~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 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.~~

§ 1.2 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 indicated results. In the

event of any inconsistency or ambiguity in the Contract Documents, the higher quality, quantity or cost shall prevail and govern.

~~§ 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 Execution of the Contract by the Contractor is a representation that the Contract Documents are sufficient to have enabled the Contractor to determine the Stipulated Sum therein, to enter into the Contract, and to accomplish the Work for an amount not in excess of the Stipulated Sum within the Contract Time provided for in the Contract Documents. The Contractor further represents and warrants that prior to execution of the Contract it has visited and examined the Project site, examined all physical, legal, and other conditions affecting the Work and is fully familiar with all of the conditions thereon and thereunder affecting the same, including (1) the nature, location and character of the Project site, including all structures and obstructions thereon, both natural and man-made; (2) the nature, location, and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; and (3) the quality and quantity of all materials, supplies, tools, equipment, labor and professional services necessary to complete the Work in the manner and within the cost and time frame required by the Contract Documents.

§ 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 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 will retain all common law, statutory, and other reserved rights ~~in their Instruments of Service~~, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment 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 this 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 material or equipment 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 material or equipment suppliers may not use the Instruments of Service on other projects or for additions to the this 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.~~

~~§ 1.7 Digital Data Use and Transmission of Data in Digital Form~~

~~The parties shall agree upon protocols governing the transmission and use of~~ If the parties intend to transmit 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. they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

~~§ 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.~~

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 Owner shall designate in writing a representative who shall have ~~express~~ limited 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 [Reserved]~~

~~§ 2.2.1 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~~ **§ 2.2.3** 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 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 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~~ **§ 2.2.4** The Owner shall furnish available and known surveys 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 information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work of the Project. -

~~§ 2.3.5~~ **2.2.5** 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~~ **2.2.6** 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.

§ 2.34 Owner’s Right to Stop the Work

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.

§ 2.45 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 ten-day period after receipt of written 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 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 deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor 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 Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor 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.~~

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.

§ 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 2-3.42.2.3, 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 and Owner 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-make 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. 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, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and 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 written notice to the Owner and Architect, and shall propose alternative- and shall not proceed with that portion of the Work without further written instructions from the Owner. If the Contractor is then instructed to proceed with the required 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 or procedures~~ without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required 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, Suppliers 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.

§ 3.3.3 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.

§ 3.3.4 The Contractor shall perform such detailed examination, inspection and quality surveillance of the Work so as to ensure that the Work is progressing satisfactorily and being completed in strict accordance with the Contract Documents.

§ 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 Except in the case of minor changes in the Work ~~approved by the Architect in accordance with Section 3.12.8 or ordered authorized~~ by the Architect in accordance with Section Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the written consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 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.

§ 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 performed in a skillful and workmanlike manner. Contractor further warrants that from one (1) year from Substantial Completion, the Work will be free from defects, except for those inherent in the quality of the Work that the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements, including substitutions not properly approved or authorized, may be considered defective. When applicable, manufacturer product and supplier warranties are over and above the one (1) year warranty, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed or supervised by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the ~~Architect~~ Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. Warranties in the Contract Documents shall survive completion, acceptance, final payment and termination (if applicable). The provisions of this Section 3.5.1 shall be applicable only to a claim for breach of this warranty which is delivered by Owner to Contractor in writing within one (1) year following Substantial Completion of the Work. Owner and Contractor shall collectively perform a Warranty Review walk through of the Project eleven (11) months following Substantial Completion and mutually agree upon a list of open items of Work which need to be completed.

§ 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. The Contractor shall secure, assign if requested and furnish directly to the Owner all written warranties required by the Contract Documents, first executed by the applicable Subcontractor and those suppliers and manufacturers furnishing materials for the Work, which shall extend to the Owner all rights, claims, benefits and interests that the Contractor may have under express or implied warranties or guarantees against the Subcontractor, supplier or manufacturer for defective or non-conforming Work. Prior to furnishing Owner with written guarantees and warranties, the Contractor shall provide copies to the Architect for review.~~

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use, business and occupation, income and similar taxes for the Work 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. Contractor shall also be solely responsible for paying for any tariffs imposed by any government entity.

§ 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. Contract and Subcontractor, as applicable, shall secure all necessary trade permits.

§ 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 coordinate and schedule all Work with permitting agencies and shall keep the Owner informed of all communications with these authorities.

§ 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

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 written notice to the Owner and the Architect before conditions are disturbed and in no event later than ~~14~~7 days after first observance of the conditions. Failure to timely provide written notice shall constitute a waiver of any concealed or unknown conditions claim. 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 in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim proceed 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.

§ 3.8 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 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. The Owner shall have the right to approve the superintendent and project manager.

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

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

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The 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 conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, consistent with the Contract Documents, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit a submittal schedule the schedule(s) for the Architect's and Owner's approval. The Architect's approval shall not ~~be~~ unreasonably be 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 with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

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

§ 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 way by which 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 be returned by the Architect without action.

§ 3.12.5 The Contractor shall create a submittal schedule and review for compliance with the Contract Documents, note any deviations from the Contract Documents, approve, in writing and submit to the Architect, ~~and Owner~~ Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect and Owner 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~~ separate contractors. At the time of submission, the Contractor shall inform the Architect and Owner in writing of any deviations on the Shop Drawings, Product Data or samples from the requirements of the Contract Documents. The Contractor shall keep accurate and current records of the receipt, review and delivery of all submittals.

§ 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 in writing.

§ 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 informed the Architect in writing 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 written 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.

~~§ 3.12.10.4~~ 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 a properly~~ licensed design professional, 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, ~~and completeness~~ of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor ~~the all~~ 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.~~

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 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~~ and patching shall be restored to the condition existing prior to the cutting, fitting, ~~or~~ and 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~~ separate contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a ~~Separate Contractor~~ separate contractor except with written consent of the Owner and of ~~the Separate Contractor.~~ Consent such separate contractor; such Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a ~~Separate Contractor, its~~ separate contractor the Contractor's 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 or rubbish caused by operations under the Contract as provided for in the Specifications. Contractor shall not interfere with Owner's ongoing business activities. 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.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect ~~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 such 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 prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for ~~the such~~ loss unless ~~the such~~ information is promptly furnished to the Architect.

§ 3.18 Indemnification

~~§ 3.18.1 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.~~

See AIA A101-2017, Article 8.7.

~~§ 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.~~

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.~~ The Owner shall 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.

§ 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 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. The Architect is not authorized to change the Stipulated Sum or Contract Time.

§ 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, except as provided in Section 3.3.1.

§ 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~~ and from the most recent construction schedule submitted by the Contractor, and ~~(3) 2~~ 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 Facilitating Contract Administration

~~The~~ Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, The Owner and Contractor shall ~~include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project.~~ endeavor to

communicate with each other and the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with Separate Contractors/separate contactors 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 and Owner have~~ and Owner have authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect and Owner will have authority to require inspection or testing of the Work in accordance with Sections ~~13.4.2-13.5.2~~ and ~~13.4.3-13.5.3~~, whether or not ~~the such~~ Work is fabricated, installed or completed. However, neither this authority of the Architect and Owner 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 or Owner to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect and Owner 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 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 and Owner'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 and Owner's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, 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, and may order authorize minor changes in the Work as provided in Section 7.4. The Owner, after consulting with 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~~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 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.~~ [Reserved]

§ 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 All communication between the Architect and Contractor will be copied to the Owner.

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 separate contractor or~~ subcontractors of a ~~Separate Contractor~~ 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 or Supplier.

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

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall ~~notify~~ furnish in writing to the Owner and through the Architect of the names of 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~~) proposed for each principal portion of the Work. The Architect and Owner may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect (+) has reasonable objection to any such proposed person or entity or (2) that the Architect or Owner requires additional time for review. Failure of the Owner or Architect to provide notice reply 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 the Owner or Architect makes reasonable objection to such substitution.

§ 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. The Contractor shall schedule, supervise and coordinate the operations of all Subcontractors of any tier.

§ 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 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
 - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract, but only for events and payment obligations that occur after the date of the assignment.

§ 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 cost resulting from the suspension.

§ 5.4.3 Upon such 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 to award separate contracts in connection with other portions of the Project or other construction or operations on the site~~ under Conditions of the Contract identical or substantially similar to those of this Contract, these including those ~~provisions of the Conditions of the Contract~~ portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 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 shall provide for coordination of the activities of the Owner's own forces and of each ~~Separate Contractor~~ separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with ~~any Separate Contractors other separate contractors~~ and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to ~~its~~ the 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, 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~~ 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~~ separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly ~~notify-report to the Architect of~~ and Owner apparent discrepancies or defects in ~~the such other construction or operations by the Owner or Separate Contractor~~ that would render it unsuitable for such 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 so to report~~ shall constitute an acknowledgment that the Owner's or ~~Separate Contractor's~~ 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~~ 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~~ 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~~ separate contractors as provided in Section 10.2.5.

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

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, ~~Separate Contractors,~~ 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~~ Owner 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.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. ~~A;~~ a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. ~~An;~~ 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,~~ and 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.

§ 7.1.4 Before effectuating a Change in the Work, the Contractor shall propose the amount of change in the Contract Sum, if any, and the extent of change in the Contract Time, if any, arising from the proposed Change in the Work. The Contractor shall promptly submit its responsive proposal and shall in good faith specify the components and amounts by which the Contract Sum and/or Contract Time would change as well as provide supporting back-up information.

§ 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;
- .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.

§ 7.3 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~~ 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect and Owner within seven (7) days 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. Without such timely written response, the Contractor shall conclusively be deemed to have accepted Owner's adjustment.

§ 7.3.6 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.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and 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 ~~7.3.7~~ shall be limited to the following:

- .1 Costs of labor, including ~~applicable payroll taxes, social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and 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~~ Work; and
- .5 Costs-Additional 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 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 and the Owner has authority to~~ order minor changes in the Work ~~that are consistent with the intent of the Contract Documents and do not involve an~~ not involving adjustment in ~~the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. 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 and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect or the Owner and shall be binding on the Owner and Contractor. The Contractor shall promptly carry out such written orders.

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~~ established in Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day 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, prematurely commence operations on the ~~Work-site or elsewhere~~ prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. ~~The date of commencement of the Work shall not be changed by the effective date of such insurance.~~

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time and shall achieve Final Completion within the time specified in the Contract Documents.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 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, or of an employee of either, or of a ~~Separate Contractor~~ separate contractor employed by the Owner; or; (2) by changes ordered in the Work, only to the extent reflected in approved Change Orders providing for

specific extensions of the Contract Time; or (3) by unanticipated, abnormal weather; or (4) by industry-wide labor disputes, fire, unusual delay in deliveries, governmental delays (including permit delays not caused by the Owner), unavoidable casualties, ~~adverse weather conditions documented in accordance with Section 15.1.6.2,~~ or other causes beyond the Contractor's control; ~~(4) or (5)~~ by delay authorized by the Owner pending mediation and ~~binding dispute resolution litigation;~~ or ~~(5)~~ by other causes that the ~~Contractor asserts~~ Owner, ~~and in consultation with~~ the Architect determines, ~~may~~ justify delay, then the Contractor shall reasonably attempt to mitigate the delay, and the Contract Time shall be extended by Change Order for such reasonable time, limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby, as the Architect may determine and the Owner may determine consistent with the provisions of the Contract Documents. In no event, however, shall the Contractor be entitled to any extension of time absent proof of (1) delay to an activity on the critical path of the Construction Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion, or (2) delay transforming an activity into the critical path of the Construction Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15 and shall include any proposed changes in the Contractor's Construction Schedule or the Contract Time, a description of any event that could delay performance or supplying of any item of the Work, the expected duration of the delay, the anticipated effect of the delay on the Contractor's Construction Schedule, and the action being taken to correct the delay situation. Should the Owner or Architect be aware of the occurrence or existence of a delay through means other than the Contractor's written notification shall not constitute a waiver of a timely or written notice or Claim.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents. The Contractor is entitled to a change, to the extent permitted by the Contract Documents, in the Contract Time and Contract Sum if the delay was caused by the Owner, the Owner's Consultants or the Architect, or anyone acting on behalf of them. The Contractor is not entitled to an increase in the Contract Time or in the Contract Sum if the delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them. The Contractor is only entitled to a change in Contract Time and no additional compensation, if the delay was not caused by the Owner, the Owner's Consultants, the Architect, or anyone acting on behalf of them and not caused by the Contractor, including Subcontractors of any tier and anyone acting on behalf of them.

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 and Owner, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work. ~~The schedule of values shall be and prepared in the such form, and supported by the such data to substantiate its accuracy, required by as the Architect and Owner may require.~~ This schedule, unless objected to by the Architect, 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.~~

§ 9.3 Applications for Payment

§ 9.3.1 Progress payments will be made monthly for Work duly certified, approved and performed during the period preceding the Application in accordance with the Contract Documents. 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 Such application shall be notarized, if required, and supported by all such data substantiating the Contractor's right to payment that as 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~~ may require.

§ 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 material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 No payment request involving Subcontractor costs shall include amounts the Contractor does not intend to promptly pay its Subcontractor.

§ 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. 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.

§ 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, material suppliers, or other persons or entities ~~that making a claim by reason of having~~ 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 or~~ notify the Contractor and Owner in writing 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~~ whole or in part 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 comprising the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated; ~~and that 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 material 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 Owner may, with or without the Architect's concurrence, withhold payment, and 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~~ 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.~~

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

~~§ 9.5.4~~ 9.5.3 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~~ material or equipment suppliers 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~~ Architect will reflect such payment on ~~its the~~ next Application Certificate for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment and it has been approved by the Owner, 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 material and equipment 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~~ Contractor payments to material and equipment 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~~ and 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, shall create any

fiduciary liability or tort liability on the part of the Contractor for breach of trust, ~~or~~ or shall 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 days after receipt of the Contractor's timely Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, ~~the amount certified by the Architect or awarded by binding dispute resolution~~ the undisputed amount due and owing to the Contractor, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing 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 costs of ~~shutdown~~ shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 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.

§ 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. Contractor shall proceed promptly to complete and correct items on the list. 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 the Owner will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect'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 to determine Substantial Completion. If the Owner determines that the Work is not substantially complete, the Contractor shall expeditiously complete the Work and pay for all costs associated with the re-inspection.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and shall 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.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in ~~the such~~ Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to ~~the such~~ 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.

§ 9.8.6 Contractor shall prepare, monitor and cause to be completed, all punch lists and report weekly to the Owner on outstanding punch list items.

§ 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 as required under Section 11.3.1.5 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. 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 The Contractor shall cause punch list items to be completed within sixty (60) days of Substantial Completion. If the Contractor fails to correct the deficiencies within the time period required, the Owner may, upon seven (7) days' notice to Contractor, take over and perform the punch list items and deduct the actual costs from the Cost of the Work. Upon receipt of the Contractor's written 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, and 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 terms and conditions of 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 and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial 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, and (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 such 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 such lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 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~~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; or
- .3 terms of special warranties required by the Contract Documents; ~~or, 4~~ ~~audits performed by the Owner, if permitted by~~ including warranties as provided in the Contract Documents, ~~after final payment.~~

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, ~~or a~~ or material 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 The execution of a Change Order shall constitute a waiver of all claims by the Contractor arising out of the Work, except as specifically described in the Change Order.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be solely 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~~ or the Contractor's Subcontractors or Sub-subcontractors; 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.

§ 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~~ , except 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-such~~ 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 At all times until the Owner's occupancy of the Work or a designated portion of the Work, the Contractor shall exercise reasonable precautions to protect the Work from damage, weather, deterioration, theft, vandalism and malicious mischief. The Contractor shall bear the risk of any losses that are uninsured as a result of the Contractor's failure to procure insurance required under the Agreement to the extent the above-mentioned losses are not covered by the Contractor's insurance. For any deductible amounts, Contractor is responsible to pay for the deductible amount.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 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 report the condition to the Owner and Architect ~~of the condition in writing~~.

§ 10.3.2 Upon receipt of the Contractor's written 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-such~~ material or substance or who are to perform the task of removal or safe containment of ~~the-such~~ 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-in~~ the amount of the Contractor's reasonable additional costs of ~~shutdown~~shut-down, delay, and start-up.

§ 10.3.3 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, or except as identified by Owner as a potential or known hazard in the specifications or elsewhere in the contract documents.

§ 10.3.4 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-indemnify and defend~~ the Owner for the cost and expense the Owner incurs (1) for remediation of ~~hazardous materials or substances~~ a material or substance 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-indemnify~~ 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 Liability 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. The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable to:~~

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed and as required by law;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall, at a minimum, include the following:

- .1 Commercial general liability (including premises/operations; bodily injury (including coverage for death and mental anguish); products and completed operations; personal injury; allowance for cross liability and severability of interest; broad form property damage (including coverage for explosion, collapse, and underground property damage);) with coverage in a combined single limit in the minimum amount of \$1,000,000 per occurrence per project and \$2,000,000 in the annual aggregate per project, \$1,000,000 products and completed operations per occurrence and \$1,000,000 personal and advertising injury per occurrence; coverage shall contain no exclusion or restriction for residential development or construction; and defense costs shall be outside of the policy limits;
- .2 Products and completed operations coverage to be maintained for the greater of the statute of repose and/or limitations or six (6) years after Substantial Completion;
- .3 Worker's compensation coverage as required by law, with employer's liability coverage in the amount of at least \$1,000,000 each accident for bodily injury by accident, \$1,000,000 policy limit for bodily injury by disease including death at any time resulting therefrom and \$1,000,000 each employee for bodily injury by disease including death at any time resulting therefrom;
- .4 Business Auto Liability for all operations of Contractor's owned, hired, leased, and non-owned vehicles in limits not less than \$1,000,000 Combined Single Limit;
- .5 If any design/build work is to be performed by the Contractor's subcontractors or consultants, the Contractor shall cause to be maintained by the appropriate subcontractor or consultant Professional Liability Insurance in the following amount and coverages:
 - a) Professional Liability insurance covering claims that arise from the actual or alleged errors, omissions or acts of the Subcontractor or any entity for which the Subcontractor is legally responsible, for the provision of all professional services necessary or incidental to the fulfillment of all contract obligations by such subcontractor.
 - b) Such insurance shall be in an amount of not less than ~~\$31,000,000~~ per Claim and ~~\$32,000,000~~ Annual Aggregate placed with an insurer with an AM Best rating no less than A- VIII.
 - c) The policy shall be effective from the date of commencement of all professional services in connection with the fulfillment of all contract obligations by such subcontractor. The retroactive date in the current and future policies shall be prior to the commencement of all professional services. Coverage shall be maintained for a period not less than 36 months or the period of time Subcontractor may be held legally liable for its work, (whichever is longer) following the completion of the work; or an extended reporting period shall be purchased of 36 months or the period of time Subcontractor may be held legally liable for its work, (whichever is longer) following completion of the work
 - d) Coverages shall not include any exclusion or other limitations related to scopes of services or project type or construction type, or delays in project completion and cost overruns.
- .7 Contractor shall be required to maintain Professional Liability insurance in the amount of ~~\$51,000,000~~, or limits carried, whichever is greater and continuing in force by renewal or by an extended reporting provision for not less than six (6) years after completion of the Project or the statute of repose, whichever is greater. This coverage form shall be "claims made" form. The policy shall not contain any exclusions or restrictions for residential development or any exclusion or limitation applicable to work or operations of the type contemplated by this Agreement.
- .8 Contractors Pollution Legal Liability coverage for bodily, property damage and environmental damage and claims expenses arising at or emanating from the Project arising from all contracted operations performed on behalf of the Owner. Coverage shall include sudden and completed operations coverage for a period of six years after Substantial Completion. The minimum limits required are ~~\$51,000,000~~ each occurrence and ~~\$52,000,000~~ Aggregate. Any deductibles above \$10,000 must be approved by Owner, such approval will not be unreasonably withheld.

§ 11.1.3 The policies furnished by the Contractor in compliance with this Article 11, 11.1.2, 11.1.2.2 and 11.1.2.5 shall be primary insurance to any other liability insurance of the Owner and shall not be contributing with any coverage carried by the Owner. Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. The insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Owner Parties, including but not limited to the Owner, Owner Representative, and ~~Carletti Architects, P.S.~~ (collectively the "Owner Parties") shall be designated as additional insureds on the policies required pursuant to Section 11.1.2.1, 11.1.2.2, 11.1.2.4, and 11.1.2.5 above. The additional insured endorsement(s), by which the Owner Parties are designated as additional insureds for the commercial general liability/products and completed operations policies, shall be issued on form CG2010 1185 (pre-1996) or its equivalent and shall use the following verbiage: Skagit County, its elected officials, officers and employees are named as additional insured. The Contractor shall deliver originals of such additional insured endorsements to the Owner concurrently with its delivery of certificates of insurance for those policies. The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Owner's consultants, 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 during the Contractor's completed operations.

§ 11.1.5 Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and shall remain in force for the benefit of the Owner for claims arising out of the Work under this Contract for at least 72 months after Final Completion, or in the case of products and completed operations, professional liability, and contractor's pollution liability for such longer periods specified above. In addition, General Contractor hereby waives, and shall cause all subcontractors, sub-subcontractors, agents and employees to waive all causes of action or claims they may have against the Additional Insureds and shall have all such policies appropriately endorsed with waiver of subrogation endorsements, to the extent such endorsements are available on commercially reasonable terms.

§ 11.1.6 All insurance coverages required under this Article 11 shall be written with insurance companies having Best's rating of A-: VIII or better. Each policy shall contain all applicable conditions, definitions, exclusions and endorsements related to this Project as are generally considered to be industry standard for projects of this scope and scale in the greater metropolitan area in which the Project is located.

§ 11.1.7 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Article 11 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted on an annual basis, until such time that the 6-year requirement has been met. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

§ 11.1.8 Contractor shall require Subcontractors of every tier to comply with the insurance requirements set forth in Article 11 above, except the limits shall be as follows:

- .1 Commercial general liability (including premises/operations; bodily injury (including coverage for death and mental anguish); products and completed operations; personal injury; allowance for cross liability and severability of interest; broad form property damage (including coverage for explosion, collapse, and underground property damage);) with coverage in a combined single limit in the minimum amount of \$1,000,000 per occurrence per project and \$2,000,000 in the annual aggregate per project, \$1,000,000 products and completed operations per occurrence, and \$1,000,000 personal and

- advertising injury; coverage shall contain no exclusion or restriction for residential development or construction; and defense costs shall be outside of the policy limits;
- .2 Products and completed operations coverage to be maintained for the greater of the statute of repose and/or limitations or six (6) years after Substantial Completion;
 - .3 Worker's compensation coverage as required by law, with employer's liability coverage in the amount of at least \$1,000,000 each accident for bodily injury by accident, \$1,000,000 policy limit for bodily injury by disease including death at any time resulting therefrom and \$1,000,000 each employee for bodily injury by disease including death at any time resulting therefrom;
 - .4 Business Auto Liability for all operations of Subcontractor's owned, leased, hired, and non-owned vehicles in limits not less than \$1,000,000 Combined Single Limit;
 - .5 For any design/build work performed by the Subcontractor, the Subcontractor shall maintain Professional Liability Insurance in the amount and coverages specified in Section 11.1.2.6 of these General Conditions.

Contractor shall provide written notice to Owner if a prospective subcontractor's standard insurance does not meet these requirements. Contractor shall meet with Owner to review the cost of supplementing a proposed subcontractor's insurance to meet these requirements and any additional requirements that the Project lender may impose to determine whether the proposed subcontractor's insurance should be supplemented.

General Contractor or any subcontractor may satisfy the required Commercial General Liability and Excess Liability through participation in a project specific or owner controlled insurance policy, if applicable, provided the insurance coverage under such program is consistent with the requirements set forth within this Agreement. Notwithstanding the foregoing, General Contractor and any subcontractors must maintain at all times separate general liability coverage to support their indemnification obligations as well as for any offsite liability.

§ 11.1.9 Owner at anytime before or during the Project may require Contractor, or any of Contractor's Subcontractors of any tier to obtain additional insurance coverage at Owner's sole cost.

§ 11.2 Owner's Insurance

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

§ 11.3 Property Insurance

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final acceptance by Owner or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project and all shall be included as insureds, with Owner as first named insured and representing all other insureds.

§ 11.3.1.1 Skagit County certifies that it is a member of the Washington Counties Risk Pool (the "Pool"), as provided by RCW 48.62.031, and that it is covered by the Pool's Joint Self-Insurance Memorandum of Liability Coverage Document. Claims submitted under Chapter 4.96 RCW ("Actions against political subdivisions, municipal and quasi-municipal corporations") against Contractor, its employees, officers, volunteers and agents and/or actions in connection with or incidental to the performance of this Agreement which Contractor and/or its employees, officers, volunteers and agents are found to be liable for will be paid by the Pool and/or Contractor. The Pool's builder's risk liability limits of \$5,000,000, per occurrence, exceed limits required by this Agreement and provide coverage for builder's risk and shall respond to the same extent as if a commercial insurance policy had been purchased.

§ 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 § 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so 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 then affect 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 and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and, If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance as described above, without so notifying the Contractor in writing, then, the Owner shall reimburse the Contractor for bear all reasonable costs and damages properly 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 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.

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

The Owner, at the Owner's option, may 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

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles except Contractor shall be responsible for deductibles for losses resulting from Contractor's or Subcontractor's negligence.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 [Reserved]

§ 11.3.3 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the builder's risk insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.4 Owner shall provide Contractor with a certificate of insurance, and upon written request by Contractor, the Owner shall file with the Contractor a copy of each Builder's Risk policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

~~§ 11.5.1~~ § 11.3.5 A loss insured under the Owner's Builder's Risk property insurance required by the Agreement shall be adjusted by the Owner as fiduciary representative for the insureds and made payable to the Owner as fiduciary representative for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.211.3.10. The Owner shall pay the Architect and Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Owner Contractor, and by appropriate agreements the Architect and Contractor shall, written where legally required for validity, shall require Subcontractors to make payments to their consultants and Subcontractors Sub-Subcontractors in similar manner.

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

§ 11.3.6 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, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. 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.

§ 11.3.7 The Owner as representative for the insureds 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 is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as representative for the insureds shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 Performance Bond And Payment Bond

Contractor is required to furnish bonds covering full performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

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 examination and be replaced at the Contractor's expense without change in the Contract Time or Contract Sum.

§ 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 or Owner 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.~~ costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, ~~the such~~ costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or Owner or 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 Owner's or 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-an 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 written 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 ~~2.52.4~~.

§ 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-for an additional one year period for 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, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 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.

§ 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.~~

§ 13.2 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 ~~consent of which shall not unreasonably be withheld~~. If either party attempts to make such an assignment without such consent, that party 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~~ such assignment.

§ 13.3 [Reserved]

§ 13.4 Rights and Remedies

~~§ 13.3.1-13.4.1~~ 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.

~~§ 13.3.2-13.4.2~~ 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~~ there under, except as may be specifically agreed ~~upon~~ in writing.

§ ~~13.4-13.5~~ Tests and Inspections

~~§ 13.4.1-13.5.1~~ 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 and Owner 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 (1) 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, and (2)~~ tests, inspections, or approvals where building codes or applicable laws or regulations so ~~require~~ prohibit the Owner from delegating their cost to the Contractor.

~~§ 13.4.2-13.5.2~~ 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 ~~13.4.1-13.5.1~~, 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 acceptable to 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 ~~13.4.3-13.5.3~~, shall be at the Owner's expense.

§ ~~13.4.3~~ 13.5.3 If such procedures for testing, inspection, or approval under Sections ~~13.4.1~~ 13.5.1 and ~~13.4.2~~ 13.5.2 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.

§ ~~13.4.4~~ 13.5.4 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~~ 13.5.5 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~~ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ ~~13.5~~ 13.6 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at ~~the~~ such rate as the parties may 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.

§ 13.7 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, 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 13.7.

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 30 consecutive days through no act or fault of the Contractor, ~~or~~ a Subcontractor, ~~a~~ Sub-subcontractor, ~~or~~ their agents or employees, or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, 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;
- .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 promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, ~~or~~ a Subcontractor, ~~a~~ Sub-subcontractor, ~~or~~ their agents or employees, or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, 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' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as including reasonable overhead and profit ~~on Work not executed~~, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, ~~or~~ a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons ~~or entities~~ performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to 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 for materials or labor 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.

§ 14.2.2 When any of the above reasons ~~described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action~~ exist, 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' written 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 cost and time caused by suspension, delay, or interruption ~~under as described in~~ Section 14.3.1. Adjustment of the Contract Sum shall 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 equitable adjustment is made or denied under another provision of the Contract; ~~or~~
- .3 the suspension, delay or interruption was the result of Contractor's deficient or non-compliance of the Work.

§ 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 written 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 shall only be entitled to receive payment for Work properly executed, and costs incurred by reason of the such termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

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, adjustment or interpretation of the Contract terms, payment of money, a change in the Contract Time extension of time, or other relief with respect to the terms of the Contract Documents. 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~~ Claims must be initiated in writing and include the information and substantiation required by the Contract Documents. Neither a Request for Information, nor a Construction Change Directive, nor a Change Order, nor a reservation of rights, nor minutes of a meeting, nor the Contractor's response to a Change Order proposal, nor a notice of a potential or future Claim shall constitute a Claim~~the Contract Documents.~~

§ 15.1.2 ~~Time Limits on Claims~~

~~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 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.

Claims by Contractor must be initiated in writing within the time specified in Section 15.2.2, and include the information and substantiation required by the Contract Documents with a copy sent to the Architect.

~~§ 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 notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 ~~15.1.3~~ Continuing Contract Performance

~~§ 15.1.4.1~~ Pending final resolution of a Claim, including the dispute resolution process, and 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 maintain the Contractor's Construction Schedule, and the Owner shall continue to make payments of undisputed amounts 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 decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 ~~15.1.4~~ Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided in Section 15.1.3 herein shall be given before proceeding to execute the portion of the Work that is the subject of the Claim Work, and a written notice and a written Claim must be made in strict accordance with this Article 15, or it will be waived. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect or Owner's Consultants, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a disputed 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, a Claim shall be filed in accordance with this Article 15. Prior written notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ ~~15.1.6~~15.1.5 Claims for Additional Time

§ ~~15.1.6.1~~15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided in Section 15.1.3 herein shall be given and a written Claim as specified in Article 15 shall be submitted. The Contractor's Claim shall include an estimate of any 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~~15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time (based on the historic climatic data), 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~~ critical path of the Construction Schedule, and that the adverse weather conditions would have caused the delay whether or not the Work was on schedule. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. The Contractor shall be entitled to a change in the Contract Time only if the Contractor can substantiate that there was materially greater than normal inclement weather considering the full term of the Contract Time and using a ten-year average of accumulated record mean values from climatological data compiled by the U.S. Department of Commerce National Oceanic and Atmospheric Administration for the locale of the Project, and that the alleged abnormal inclement weather actually extended the critical path of the Work indicated on the Contractor's approved Construction Schedule. If the total net accumulated number of calendar days lost due to inclement weather from commencement of the Work until Final Completion exceeds the total net accumulated number to be expected for the same period from the aforesaid data including float, and the Owner grants the Contractor a time extension, the Contract Time will be adjusted (as Contractor's sole remedy) by the corresponding number of calendar days indicated on the critical path of the Contractor's approved Construction Schedule.

§ ~~15.1.7~~15.1.6 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 only includes

- .1 damages incurred by the Owner for ~~rental expenses, for losses of use, income, profit, loss of 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 and home office overhead and expenses including but not limited to the compensation of personnel stationed there, for losses of financing, business and reputation, and for losses on other projects, for interest or financing costs, 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 but is not applicable to consequential damages based on Contractor's indemnification and defense obligation provided in the Agreement or otherwise covered by any applicable insurance. Nothing contained in this Section ~~15.1.7~~ 15.1.6 shall be deemed to preclude assessment an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 ~~Initial Decision~~Resolution of Claims and Disputes

§ 15.2.1 In an effort to reduce the incidence and costs to all parties of extended disputes, all Claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, except claims which have been waived under the terms of the Contract Documents, shall be decided exclusively by the following alternative dispute resolution procedure unless the parties mutually agree in writing otherwise.

§ 15.2.2 Except for Claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall submit a written notice of any Claim to the Owner within seven (7) days after the occurrence of the event giving rise to such Claim. The notice shall include a clear description of the event leading to or causing the Claim. For all Claims, the Contractor shall submit a written Claim as provided herein within thirty (30) days of submitting the notice. Claims shall include a clear description of the Claim and any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path and other information referenced in Section 8.3.2) and shall provide all data supporting the Claim, including without limitation a complete explanation as to why the relief sought is not within the scope of the Contract Documents. Failure to properly submit the notice or Claim shall constitute waiver of the Claim or substantiate a Claim. The Claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor (and Subcontractors of any tier) is entitled. Any claim of a Subcontractor of any tier may be brought only through, and after review by, the Contractor who shall certify the Claim under penalty of perjury as

true and accurate. For the purposes of calculating such time periods, an “event giving rise to a Claim,” among other things, is not a Request for Information but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time.

§ 15.2.3 Notice and Claims. All notices and Claims shall be made in writing as required by the Contract. Any notice of a Claim of the Contractor against the Owner and any Claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract. No act, omission, or knowledge, actual or constructive, of the Owner, the Owner’s Consultants, the Owner’s separate contractors, or the Architect shall in any way be deemed to be a waiver of the requirement for timely written notice and a timely written Claim unless the Owner and the Contractor sign an explicit, unequivocal written waiver approved by the Owner. The fact that the Owner and the Contractor may consider, discuss, or negotiate a Claim that has or may have been defective or untimely under the Contract shall not constitute a waiver of the provisions of the Contract Documents unless the Owner and Contractor sign an explicit, unequivocal waiver approved by the Owner. Failing to strictly follow the notice and claim requirements contained herein shall constitute a complete waiver and release of Contractor’s claim.

~~§ 15.2.1 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 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 is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker’s sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.~~

~~§ 15.2.3 In evaluating Claims, the Initial Decision Maker 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 in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner’s expense.~~

~~§ 15.2.4 If the Initial Decision Maker 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 when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.~~

~~§ 15.2.5 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~~**15.2.4** 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~~**15.2.5** 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 the initiation of binding dispute resolution. This requirement cannot be waived except by an explicit written waiver signed by both parties.

~~**§ 15.3.2** **[Reserved]** 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** 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.~~

§ 15.4 Arbitration

~~**§ 15.4.1** See Article 6.2 of the AIA A101-2017. The method for binding dispute resolution shall be litigation. 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.~~



SECTION 00 73 43
WAGE RATE REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. This schedule of prevailing wage rates for the locality or localities of the Work, as described by the Industrial Statistician of the Department of Labor and Industries, is included for ease of reference. Federal funds will be used in this project, so Contractor must pay employees the higher of federal and state prevailing wages. Contractor remains solely responsible for verifying that the rates shown within this Section are accurate, current, and inclusive for all parts of this Work. Contractor is responsible for notifying the Architect, in writing, of any problems, errors, or discrepancies in this Section no later than 7 working days prior to Bid opening. Any off-site prefabrication may also require prevailing wages and the Contractor should contact the Department of Labor and Industries to ascertain those rates.
- B. Contractor to provide the "Notice of Intent to Pay Prevailing Wage Rates", as required by RCW 39.04, 39.12, 43.19, and 49.28 as amended. All paperwork regarding "Notice of Intent to Pay Prevailing Wage Rates" shall be sent directly to the owner. The rules and regulations of the Department of Labor and Industries and the schedule of prevailing wage rates for the locality or localities where this Contract will be performed as determined by the Industrial Statistician of the Department of Labor and Industries, are by reference made a part of this Contract as though fully set forth herein.

Current prevailing wage data are available online or at the following:

ADDRESS: Department of Labor and Industries
Prevailing Wage Section
P.O. Box 44540
Olympia, Washington 98504-4540

[https:// ini.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates/](https://ini.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates/)

The General Contractor and his sub-contractors are to pay for all filing fees for Statements of Intent to Pay Prevailing Wages and Affidavits at \$40.00 each document submitted. Pay for any change in rate during the course of construction.

Submit forms to: Department of Labor and Industries
Prevailing Wage Section
P.O. Box 44540
Olympia, Washington 98504-4540

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 00 82 50

SPECIAL CONDITIONS

The Project consists of furnishing all labor, materials and other incidentals for the remodel of the Skagit County Community Center as per the Special Provisions, the Standard Specifications including the amendments thereto, and Contract Documents hereunder. The Architect's estimate is \$1 million for the project.

1. A mandatory pre-bid conference for prospective bidders will be held at the building at 153 Railroad Avenue, Concrete, WA at 10:00 AM on March 3, 2025. Group will meet on the south end elevator lobby on the third floor of the administration building.
2. The Owner / Architect will make application for the building permits. The Owner shall pickup and pay for the building permit. Contractor shall be responsible to pay for and procure separate electrical permit.

A. ACCESS TO WORK

The General Contractor and their subcontractors shall have access to the project site during and after normal working hours. Any work outside these hours including weekends must be coordinated 48 hours ahead of time with the Owners Representative.

B. BUILDING OCCUPANCY

This building will be unoccupied for the duration of the work.

C. STAGING

Contractor shall refer to the site plan and Drawings for locations of staging areas and for locations of dumpsters for removal of construction debris.

D. PREVAILING WAGES

Federal funds will be used in this project, so Contractor must pay employees the higher of federal and state prevailing wages. Contractor and subcontractors shall submit a "Statement of Intent to Pay Prevailing Wages" prior to submitting first application for payment. Each statement of intent to pay prevailing wages must be approved by the Industrial Statistician of the Department of Labor and Industries before it is submitted to the County. Unless otherwise authorized by the Department of labor and Industries, each voucher claim submitted by a Contractor for payment on a project estimate shall state that the prevailing wages have been paid in accordance with the pre-filed statement or statements of Intent to Pay prevailing Wages on file with the public agency.

E. AFFIDAVIT OF WAGES PAID

Following the final acceptance of a Public Works project, the Contractor and each and every subcontractor shall submit "Affidavit of Wages Paid" before the funds retained according to the provisions of RCW 60.28.010 are released to the Contractor. Each Affidavit of Wages Paid must be certified by the Industrial Statistician of the Department of Labor and Industries before it is submitted.

F. SUBMITTAL FEES

“Intent to Pay Prevailing Wages” and “Affidavit of Wages Paid” must be submitted to the Industrial Statistician of the Washington State Department of Labor and Industries accompanied by current rate for each individual form. This fee is to be paid by the Contractor. All bidders are advised to consider these charges when tabulating their bids.

G. RETAINED PERCENTAGE

The Contractor shall comply with Title 39 RCW and Ch. 60.28 RCW.

H. SPECIAL REPORTS

General: Submit special reports directly to the Owner within one day of an occurrence. Submit a copy of the report to the Architect and other entities that are affected by the occurrence.

Reporting Unusual Events: When an event of an unusual and significant nature occurs at the site, prepare and submit a special report. List chain of events, persons participating, response by the Contractor’s personnel, and evaluation of the results or effects and similar pertinent information.

Reporting Accidents: Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

I. PAYMENT REQUESTS

Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issues by the Architect, the Owner shall make progress payments on account of the Contract Sums to the Contractor as provided in the Contract Documents for the period ending the twenty-fifth (25) day of the month as follows:

1. The Contractor shall submit Applications for Payment for the preceding month by the first day of each month. The Owner shall make progress payments to the Contractor not later than thirty (30) days following the Architect’s receipt of the Application for Payment from the Contractor.
2. The Owner shall pay to the Contractor, on each application for Payment, materials, equipment incorporated in the Work and to materials and equipment suitably stored at the site or at some other location agreed upon in writing, for the period covered by the application for Payment, less the aggregate of previous payments made by the Owners.

The Owner will not be liable for interest or penalties charged by the Contractor on any Payments delayed due to Contractor’s failure to inform himself of the Owner’s normal procedures or to submit payment requests timely.

The Contract Sum and any agreed variations thereof, shall include all Federal, State and Local taxes imposed by laws, and properly chargeable to the project except the State of Washington Sales Tax. Washington State and Local Sales Taxes as applied to the materials and labor or equipment which becomes part of the Work will be paid by the Owner; a proportionate amount of the tax will be added to each payment voucher issued to the Contractor. The Contractor shall pay all other sales, consumer, use and similar taxes properly levied by Washington State and Local Agencies for the Work or portions thereof provided by the Contractor which are legally enacted at the time bids are received, whether or not yet effective. For payment requests, use AIA Form G702, fully completed, executed and notarized. Submit the forms in triplicate, including attachment of waivers and similar documentation with one copy. Prior to the initial payment request, submit:

1. List of principal subcontractors and suppliers, including contact persons and their addresses and telephone numbers.
2. List of principal staff assignments with addresses and telephone numbers.
3. Schedule of Values.
4. Construction Schedule.

Following issuance by Architect of Certificate of Substantial completion, Contractor may submit special payment request, provided the following have been completed:

1. Obtain permits, certificates of inspection and other approval and releases by governing authorities, required for Owner's operational / maintenance personnel.
2. Complete final cleaning of work.
3. Submit as-built documents.
4. Submit listing of work to be completed before final acceptance.

Following completion of the following requirements, final payment request may be submitted:

1. Complete work listed as incomplete at time of substantial completion, or otherwise assure Owner of subsequent completion of individual incomplete items.
2. Settle liens and other claims or assure Owner of subsequent settlement.
3. Submit proof of payment on fees, taxes and similar obligations.
4. Transfer operational, access, security and similar provisions to Owner; and remove temporary facilities, tools and similar items.
5. Affidavits of Wages Paid from all entities who worked at the site.
6. Completion of requirements specified in "Contract Closeout" section.

7. Obtain consent of surety for final payment.
8. Provide evidence of full payment of all industrial insurance premiums as required by RCW 51.12.050 and / or RCW 51.12.070.

Payments will be mailed to Contractor's place of business. Payments cannot be picked up personally.

J. CDBG CONDITIONS

Washington State Department of Commerce, Community Development Block Grant Program's CBDG Conditions apply to this project. Attachment 7-A(1) follows.

END OF SECTION

"General Decision Number: WA20240112 10/25/2024

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State: Washington

Construction Type: Building

County: Skagit County in Washington.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> ◆ Executive Order 14026 generally applies to the contract. ◆ The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> ◆ Executive Order 13658 generally applies to the contract. ◆ The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be

APPENDIX A

adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	05/24/2024
1	07/12/2024
2	09/06/2024
3	09/27/2024
4	10/25/2024

ASBE0007-007 06/01/2023

	Rates	Fringes
HEAT & FROST INSULATOR (Includes Duct, Pipe and Mechanical Systems).....	\$ 66.37	18.59

BRWA0001-021 06/01/2023

	Rates	Fringes
BRICKLAYER.....	\$ 50.77	17.68

BRWA0001-023 06/01/2023

	Rates	Fringes
TILE FINISHER.....	\$ 36.91	16.05
TILE SETTER.....	\$ 45.63	16.50

CARP0425-001 06/01/2023

	Rates	Fringes
CARPENTER.....	\$ 59.92	15.04

ELEC0191-006 01/01/2024

Rates	Fringes
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ELECTRICIAN.....\$ 55.01 29.20

 ENGI0302-042 06/01/2023

Rates Fringes

OPERATOR: Bulldozer
 D9 & under.....\$ 54.47 25.57

 ENGI0302-053 06/01/2023

Rates Fringes

OPERATOR: Blade Finish.....\$ 53.42 25.57

 ENGI0302-054 06/01/2023

Rates Fringes

OPERATOR: Grader/Blade.....\$ 54.13 25.57
 OPERATOR: Paver (Asphalt,
 Aggregate, and Concrete).....\$ 54.13 25.57

 ENGI0302-058 06/01/2023

Rates Fringes

OPERATOR: Loader
 Overhead 6 yards but not
 including 8 yards.....\$ 55.80 25.57
 Overhead under 6 yards.....\$ 55.09 25.57

 ENGI0302-065 01/01/2024

Rates Fringes

OPERATOR: Crane
 Under fifty (50) tons.....\$ 50.27 16.90

 ENGI0302-066 06/01/2023

Rates Fringes

OPERATOR: Crane
 100 tons through 199 tons,
 or 150' of boom (including
 jib with attachments).....\$ 56.64 25.57
 20 tons through 44 tons
 with attachments; Truck

APPENDIX A

Crane Oiler/Driver: 100		
tons.....	\$ 55.09	25.57
200 tons- 299 tons, or 250?.	\$ 57.46	25.57
45 tons through 99 tons, under 150' of boom (including jib with attachments).....	\$ 55.80	25.57

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IRON0086-006 01/01/2024

	Rates	Fringes
IRONWORKER.....	\$ 53.45	34.02

LAB00242-013 06/01/2023

	Rates	Fringes
LABORER: Common or General.....	\$ 44.53	14.40

LAB00242-015 06/01/2023

	Rates	Fringes
LABORER: Form Stripping.....	\$ 44.53	14.40

LAB00242-018 06/01/2023

	Rates	Fringes
LABORER: Jackhammer.....	\$ 45.61	14.40

LAB00242-019 06/01/2023

	Rates	Fringes
LABORER: Mason Tender - Cement/Concrete.....	\$ 44.53	14.40

LAB00242-020 06/01/2023

	Rates	Fringes
LABORER: Nozzle Person.....	\$ 47.95	14.40

LAB00252-017 06/01/2023

	Rates	Fringes
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Laborer, Mason Tender Brick.....	\$ 44.53	14.40

LAB00292-011 06/01/2023		
	Rates	Fringes
LABORER: Concrete Saw Chain.....	\$ 45.61	14.40

LAB00335-007 06/01/2023		
	Rates	Fringes
LABORER: Fire Watch.....	\$ 35.44	14.40

PAIN0300-003 07/01/2023		
	Rates	Fringes
PAINTER.....	\$ 37.80	13.63

PLAS0528-009 06/01/2023		
	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 52.10	20.27

PLUM0026-015 06/01/2024		
	Rates	Fringes
PIPEFITTER.....	\$ 58.47	31.90

PLUM0026-018 06/01/2024		
	Rates	Fringes
PLUMBER.....	\$ 58.47	31.90

SFWA0699-004 01/01/2024		
	Rates	Fringes
SPRINKLER FITTER.....	\$ 62.83	32.16

SHEE0066-014 07/01/2023		
	Rates	Fringes
SHEET METAL WORKER.....	\$ 63.01	31.69

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 * TEAM0174-009 06/01/2024

	Rates	Fringes
TRUCK DRIVER: Concrete Truck....	\$ 52.88	26.52

 * UAVG-WA-0001 03/01/2024

	Rates	Fringes
OPERATOR: Concrete Pump.....	\$ 52.92	22.63

 * UAVG-WA-0002 03/01/2024

	Rates	Fringes
OPERATOR: Drill.....	\$ 56.42	21.15

 SUWA2018-012 03/01/2024

	Rates	Fringes
LABORER: Asbestos Abatement (Removal from Floors, Walls, & Ceilings).....	\$ 38.85	10.70
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 41.20	3.03
LABORER: Hod Carrier.....	\$ 33.50	11.08
LABORER: Pipelayer.....	\$ 32.17	11.49
LABORER: Grade Checker.....	\$ 31.86	12.98
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 53.76	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 40.53	9.56
OPERATOR: Mechanic.....	\$ 40.77	15.91
OPERATOR: Oiler.....	\$ 36.39	16.62
OPERATOR: Roller.....	\$ 55.10	3.71

ROOFER.....\$ 27.00 0.00

TRUCK DRIVER: Dump Truck.....\$ 31.81 16.53

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the ""SA"" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R. 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

Washington State Department of Commerce
Community Development Block Grant Program

CDBG CONDITIONS

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1. Access to Records

The Contractor agrees to keep such records as the Owner may require. All such records shall be available to the Owner and duly authorized officials of the state for examination. All records pertinent to this project shall be retained by the Contractor for a period of three (3) years after the final audit.

2. Contract Security

For contracts in excess of \$100,000, the Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the contract prices as security for the faithful performance of this contract and also a payment bond in an amount not less than one hundred percent (100%) of the contract price or in a penal sum not less than that prescribed by state, territorial or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The performance bond and the payment bond may be in one or in separate instruments in accordance with local law.

3. Lands and Rights-of-Way

Prior to the start of construction, the Owner shall obtain all lands and rights-of-way necessary for the carrying out and completion of work to be performed under this contract. Any property acquisition shall comply with Title II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies of 1970 (42 U.S.C. 4630).

4. Other Prohibited Interests

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

5. Ineligible Subcontractors

The Contractor shall not subcontract any part of the work covered by this Contract or permit subcontracted work to be further subcontracted without the Local Public Agency's or Public Body's prior written approval of the subcontractor. The Local Public Agency or Public Body will not approve any subcontractor for work covered by this contract who is at the time ineligible under the provisions of any applicable regulations issued by the Secretary of Labor, U. S. Department of Labor or the Secretary of Housing and Urban Development, to receive such subcontract. Verifications of Subcontractors need to be obtained by the Contractor from www.sam.gov.

6. Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development Office of Davis-Bacon and Labor Standard

Form HUD-4010 (07/2021) – Ref. Handbook 1344.1 – Previous editions are obsolete

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

(1) MINIMUM WAGES

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment, computed at rates not less than those contained in the wage determination of the Secretary of Labor (which is attached hereto and made a part hereof), regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH1321)) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place, where it can be easily seen by the workers.

(ii) Additional Classifications.

- (A) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination;
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor, the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division ("Administrator"), Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget ("OMB") under OMB control number 1235-0023.)
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, or HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)
- (D) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (1)(ii)(B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

(2) **Withholding.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Department of Labor shall make such disbursements in the case of direct Davis-Bacon Act contracts.

(3) **Payrolls and basic records.**

(i) **Maintaining Payroll Records.** Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification(s), hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid.

Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1235-0023 and 1215-0018.)

(ii) **Certified Payroll Reports.**

(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/agencies/whd/forms> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the U.S. Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social

security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1235-0008.)

- (B) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract; and
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance” required by subparagraph (a)(3)(ii)(b).
- (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph (a)(3)(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the U.S. Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency (where appropriate), to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman’s hourly rate) specified in the contractor’s or subcontractor’s registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice’s level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program.

If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training,

Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed, unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) **Equal employment opportunity.** The utilization of apprentices, trainees, and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

- (5) **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.
- (6) **Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs (1) through (11) in this paragraph (a) and such other clauses as HUD or its designee may, by appropriate instructions, require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.
- (7) **Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract.
- (9) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.
- (10) **Certification of Eligibility.**
 - (i) By entering into this Contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.
 - (ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.
 - (iii) Anyone who knowingly makes, presents, or submits a false, fictitious, or fraudulent statement, representation or certification is subject to criminal, civil and/or administrative sanctions, including fines, penalties, and imprisonment (e.g., 18 U.S.C. §§ 287, 1001, 1010, 1012; 31 U.S.C. §§ 3729, 3802).

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

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The provisions of this paragraph (b) are applicable where the amount of the prime contract exceeds **\$100,000**. As used in this paragraph, the terms “laborers” and “mechanics” include watchmen and guards.

- (1) Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work, which may require or involve the employment of laborers or mechanics, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek, unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph B(1) of this paragraph, the contractor, and any subcontractor responsible therefor, shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph B(1) of this paragraph, in the sum of **\$27** for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph B(1) of this paragraph. In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 Note), the Department of Labor adjusts this civil monetary penalty for inflation no later than January 15 each year.
- (3) Withholding for unpaid wages and liquidated damages.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from any moneys payable on account of work performed by the contractor or subcontractor under any such contract, or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages, as provided in the clause set forth in subparagraph B(2) of this paragraph.
- (4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph B(1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs B(1) through (4) of this paragraph.

C. HEALTH AND SAFETY

The provisions of this paragraph (c) are applicable where the amount of the prime contract exceeds **\$100,000**.

- (1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
- (2) The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
- (3) The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

End of Federal Labor Standards Provisions

7. Compliance with State Prevailing Wage Requirements (RCW 39.12)

Before any payment is made of any sums due under this Contract, the Local Government Body must receive from the Contractor and each subcontractor a copy of the "Statement of Intent to Pay Prevailing Wages" approved by the Washington State Department of Labor and Industries. Also following the acceptance of the project, the Local Government Body must receive from the Contractor and each subcontractor a copy of the "Affidavit of Wages Paid" approved by the State Department of Labor and Industries. Forms may be obtained from the Department of Labor and Industries. The Contractor and each subcontractor shall pay all fees associated with and make all applications directly to the Department of Labor and Industries. These affidavits will be required before any funds retained, according to the provisions of RCW 60.28.010, are released to the Contractor. Payment by the Contractor or subcontractor of any fees shall be considered incidental to the construction and all costs shall be included in other pay items of the project.

8. Title VI of the Civil Rights Act of 1964

No person shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. (Public Law 88-352, Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et. seq.)

9. Section 109 of the Housing and Community Development Act of 1974, as Amended

No person in the United States shall on the grounds of race, color, national origin, sex or religion be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

10. Age Discrimination Act of 1975, as Amended

No person shall be excluded from participation, denied program benefits, or subjected to discrimination on the basis of age under any program or activity receiving federal funding assistance. (42 U.S.C. 610 et. seq.)

11. Section 504 of the Rehabilitation Act of 1973, as Amended

No otherwise qualified individual shall, solely by reason of his or her handicap, be excluded from participation (including employment), denied program benefits, or subjected to discrimination under any program or activity receiving Federal funds. (29 U.S.C. 794)

12. Section 3 Clause of the Housing and Community Development Act of 1968

- a. This is a Section 3 covered project. Section 3 projects means housing rehabilitation, housing construction, and other public construction projects assisted under HUD programs that provide housing and community development financial assistance when the total amount of assistance to the project exceeds a threshold of \$200,000. The project is the site or sites together with any building(s) and improvements located on the site(s) that are under common ownership, management, and financing.
- b. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by the U.S. Department of Housing and Urban Development (HUD) assistance or HUD assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons.
- c. The parties to this contract will comply with HUD's regulations as set forth in 24 CFR Part 75, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 75 regulations.

- d. The Section 3 requirements apply to all contractors and subcontractors performing work in connection with a Section 3 covered project. Contractor means any entity entering into a contract with (a) a recipient to perform work in connection with work in connection with a Section 3 project; or (b) a subrecipient for work in connection with a Section 3 project. Subcontractor means any entity that has a contract with a Contractor to undertake a portion of the contractor's obligation to perform work in connection with a Section 3 project.
- e. The contractor agrees to include this Section 3 Clause in every subcontract subject to compliance with regulations in 24 CFR Part 75, and agrees to take appropriate action upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of regulations under 24 CFR Part 75.
- f. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected, but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 75 require employment opportunities to be directed, where not filled to circumvent the contractor's obligations under 24 CFR Part 75.
- g. Noncompliance with HUD's regulations in 24 CFR Part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

13. Executive Order 11246 - Equal Opportunity Clause

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

- (a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provision of this nondiscrimination clause;
- (b) The Contractor will, in all solicitations or advertisement for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration without regard to race, color, religion, sex or national origin;
- (c) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contract Compliance Officer advising the said labor union or workers' representatives of the Contractor's commitment under this Section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment;
- (d) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor;
- (e) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the Department and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders;

- (f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations or orders, this Contract may be canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965 or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law; and
- (g) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations or orders, this Contract may be canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department, the Contractor may request the United States to enter into such litigation to protect the interest of the United States (Section 202 Equal Opportunity Clause).

14. Executive Order 11246 - Notice Requirement for Affirmative Action

- (a) The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
- (b) The Goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:
 - The female participation goal in each trade is 6.9 percent for every county in Washington State.
 - Refer to <https://www.dol.gov/sites/dolgov/files/ofccp/ParticipationGoals.pdf> for minority participation percentages.

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- (c) As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

15. Executive Order 11246 - Construction Contract Specifications

- (a) As used in these specifications:
- (1) "Covered area" means the geographical area described in the solicitation from which this Contract resulted;
 - (2) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - (3) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941; and
 - (4) "Minority" includes:
 - Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia and Indian Subcontinent, or the Pacific Islands); and
 - American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
- (b) Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the notice which contains the applicable goals for minority and female participation and which is set forth in the solicitation from which this Contract resulted.
- (c) If the Contractor is participating (pursuant to 41 CFR Part 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the plan area (including goals and timetables) shall be in accordance with that plan for those trades which have unions participating in the plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the plan goals and timetables.
- (d) The Contractor shall implement the specific affirmative action standards provided in paragraphs 82 (g) (1) through (16) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified. Covered construction contractors performing contracts in geographical areas where they do not have a federal or federally-assisted construction contract shall apply the minority and female goals established for the geographic area where the Contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be

obtained from any Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

- (e) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- (f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
- (g) The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - (1) Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such site or in such facilities;
 - (2) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources, and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses;
 - (3) Maintain a current file of the names, addresses and telephone numbers of each minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken;
 - (4) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations;
 - (5) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above;

- (6) Disseminate the Contractor's EEO Policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed;
- (7) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions, including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed and disposition of the subject matter;
- (8) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business;
- (9) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures and tests to be used in the selection process;
- (10) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force;
- (11) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3;
- (12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities;
- (13) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out;
- (14) Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes;
- (15) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business obligations; and

- (16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- (h) Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (g1 through g16). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar groups of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under (g1 through g16) of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation shall not be a defense for the Contractor's noncompliance.
- (i) A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunities and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority of women is underutilized).
- (j) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.
- (k) The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.
- (l) The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- (m) The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR Part 60-4.8.
- (n) The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company's EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable

form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.

- (o) Nothing herein provided shall be construed as a limitation upon the application of other laws, which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. Americans with Disabilities Act of 1990

Subject to the provisions of this title, no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs or activities of a public entity, or be subjected to discrimination by any such entity.

Section 3 Labor Hours Summary Report (24 CFR Part 75)

This form must be submitted by the contractor by the end of the project (generally after all certified payrolls are complete).

The work to be performed on this project is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by the U.S. Department of Housing and Urban Development (HUD) assistance or HUD assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons.

Section 3 Summary - All Project Labor Hours form: Total labor hours reported for the project using subtotals from individual contractor and subcontractors forms.

Section 3 Labor Hours - Contractor form: Contractor reports hours for all workers and for each Section 3 worker.

Section 3 Labor Hours - Subcontractor form: Each subcontractor reports hours for all workers and for each Section 3 worker.

Definitions

Section 3 Business Concern: A Section 3 business concern is defined in as a business that meets at least one of the following criteria, documented within the last six-month period:

1. At least 51 percent owned and controlled by low-income persons (see table below),
2. More than 75 percent of the labor hours performed for the business over the previous 3-month period are performed by Section 3 workers, or
3. At least 51 percent owned and controlled by current residents of public housing or Section 8-assisted housing.

Section 3 Worker :

1. The worker is a low income person (see table below);
2. Employed by a Section 3 business concern; or
3. A YouthBuild participant.

Targeted Section 3 Worker:

1. Employed by a Section 3 business concern; or
2. Employee lives within 22 miles of the Concrete Community Center Revitalization project area.

Low-income Person: An individual whose income for a annualized calendar year (any year since January 2021) is less than the income limit shown in the table below (established by HUD 2024 income limits) based on the person's county of residence.

Adams	\$ 50,400	Grays Harbor	\$ 50,400	Pierce	\$ 64,900
Asotin	\$ 47,250	Island	\$ 57,150	San Juan	\$ 56,850
Benton	\$ 55,950	Jefferson	\$ 50,400	Skagit	\$ 56,150
Chelan	\$ 51,950	King	\$ 77,700	Skamania	\$ 66,100
Clallam	\$ 51,450	Kitsap	\$ 67,050	Snohomish	\$ 77,700
Clark	\$ 66,100	Kittitas	\$ 55,400	Spokane	\$ 54,800
Columbia	\$ 51,450	Klickitat	\$ 50,400	Stevens	\$ 50,400
Cowlitz	\$ 50,400	Lewis	\$ 50,400	Thurston	\$ 63,100
Douglas	\$ 51,950	Lincoln	\$ 50,400	Wahkiakum	\$ 50,400
Ferry	\$ 50,400	Mason	\$ 51,450	Walla Walla	\$ 50,550
Franklin	\$ 55,950	Okanogan	\$ 50,400	Whatcom	\$ 59,150
Garfield	\$ 50,400	Pacific	\$ 50,400	Whitman	\$ 52,050
Grant	\$ 50,400	Pend Oreille	\$ 50,400	Yakima	\$ 50,400

Section 3 Summary - All Project Labor Hours

(hours reported for Contractor and all Subcontractors on the project)

Project Name	
Project Address	
County	
Project Owner (grantee or subrecipient)	

Contractor Name	
Address	
Person Submitting Report	
Phone	
Email Address	
Date Report Submitted	

Business Name	All Workers Labor Hours	Section 3 Workers Labor Hours	Targeted Section 3 Workers Labor Hours
Contractor	0	0	0
Sub 1	0	0	0
Sub 2	0	0	0
Sub 3	0	0	0
Sub 4	0	0	0
Sub 5	0	0	0
(add lines as necessary)			
TOTAL	0	0	0

% of Section 3 Worker Labor Hours	#DIV/0!
--	---------

% of Targeted Section 3 Worker Labor Hours	#DIV/0!
---	---------

Section 3 Labor Hours - Contractor

Contractor Business Name	
Address	
Person Submitting Report	
Phone	
Email Address	
Date Report Submitted	

Section 3 Business Concern (see instructions)	<input type="checkbox"/> IS a Section 3 Business Concern
	<input type="checkbox"/> NOT a Section 3 Business Concern

Section 3 Workers	<input type="checkbox"/> There are NOT Section 3 workers on this project
--------------------------	--

Total Labor Hours for ALL Workers on this Project (including non-Section 3 workers)	
--	--

Section 3 Worker Name	Section 3 Labor Hours	Targeted Section 3 Labor Hours
Worker Name 1		
Worker Name 2		
Worker Name 3		
Worker Name 4		
Worker Name 5		
(add lines as necessary)		
TOTAL	0	0

Under the provisions of Title 18, Section 1001 of the U.S. Code, it is a felony for any person to knowingly and willingly make false or fraudulent statements to any department of the United States Government. I, the undersigned, hereby certify that all statements contained herein, are true and correct to the best of my knowledge and belief. I understand the information I provide in this certification is subject to verification, and I agree to provide necessary documentation if requested.

Printed Name

Title

Signature

Date

Section 3 Labor Hours - Subcontractor

Subcontractor Business Name	
Address	
Person Submitting Report	
Phone	
Email Address	
Date Report Submitted	

Section 3 Business Concern (see instructions)	<input type="checkbox"/> IS a Section 3 Business Concern
	<input type="checkbox"/> NOT a Section 3 Business Concern

Section 3 Workers	<input type="checkbox"/> There are NOT Section 3 workers on this project
--------------------------	--

Total Labor Hours for ALL Workers on this Project (including non-Section 3 workers)	
--	--

Section 3 Worker Name	Section 3 Labor Hours	Targeted Section 3 Labor Hours
Worker Name 1		
Worker Name 2		
Worker Name 3		
Worker Name 4		
Worker Name 5		
(add lines as necessary)		
TOTAL	0	0

Under the provisions of Title 18, Section 1001 of the U.S. Code, it is a felony for any person to knowingly and willingly make false or fraudulent statements to any department of the United States Government. I, the undersigned, hereby certify that all statements contained herein, are true and correct to the best of my knowledge and belief. I understand the information I provide in this certification is subject to verification, and I agree to provide necessary documentation if requested.

Printed Name

Title

Signature

Date

SECTION 01 10 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Summary of Work, including:
 - 1. Project Description.
 - 2. Contract Method.
 - 3. Owner Furnished Products.
 - 4. Permit Conditions.
 - 5. Existing Utilities.
 - 6. Objection to Application of Products.
 - 7. Existing Information.
 - 8. Time of Completion.
 - 9. Contractor Use of Site.
 - 10. Material Safety Data Sheets.
 - 11. Construction Documents.
 - 12. Permits.

1.03 PROJECT DESCRIPTION

- A. Briefly and without force and effect upon the Contract Documents, the Work of this Contract can be summarized as follows:
 - 1. Provide miscellaneous demolition and new construction for the Tenant Improvement project on the Skagit County Concrete Community Center , located in Concrete, Washington as shown in the Contract Drawings and Specifications.

- B. Provide materials, labor, equipment, temporary facilities and construction expertise as required to complete the Project as shown in the Contract Documents.
- C. Contractor represents that he has carefully examined prior to bidding, all Contract Documents and site conditions, and understands the character, quality and quantity of work called for and all conditions affecting the Contract Work.

1.04 CONTRACT METHOD

- A. Construct the Work under a single Prime Contract Stipulated Sum.
- B. The General Contractor is responsible for coordinating, understanding and directing the work of all trades involved in the Project.
- C. General Contractor is responsible for coordinating and scheduling work of each subcontractor to expedite progress of the Project. Cooperate and coordinate with any other separate Contractors under contract with the Owner.

1.05 OWNER FURNISHED PRODUCTS

- A. Owner Furnished, Contractor Installed Items: Coordinate with Owner on delivery of items, any mechanical / electrical rough-in or backing required and any special installation requirements.
 - 1. Notify Owner of required delivery schedule.
 - 2. Obtain dimensions, installation instructions and any other information required for proper installation from manufacturer.
 - 3. Coordinate installation with work sequence and work of other trades.
- B. Owner Furnished, Owner Installed Items: Coordinate with Owner on any mechanical / electrical rough-in or backing required.
 - 1. Notify Owner of required installation schedule to allow installation in the proper work sequence and maintain Project schedule.
 - 2. Coordinate with Owner's separate Contractors and suppliers to accommodate their work on site and / or installation of their items.

1.06 PERMIT CONDITIONS

- A. Conform to permit conditions and requirements imposed by authority(s) having jurisdiction.

1.07 EXISTING UTILITIES

- A. The Drawings indicate existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, and other similar items and utilities which are known to the Owner.

1.08 OBJECTIONS TO APPLICATION OF PRODUCTS

- A. Subcontractors and suppliers submitting a bid for this Project shall thoroughly familiarize themselves with specified products and installation procedures and submit to Architect any objections (in writing) no later than ten days prior to Bid Date. Any response by the Architect shall be by addendum. Submittal of Bid constitutes acceptance of products and procedures specified.

1.09 EXISTING INFORMATION

- A. Subcontractors and suppliers shall verify existing site conditions prior to bidding. Submit any discrepancies between the Contract Documents and existing conditions no later than ten days prior to Bid Date. Any response by the Architect shall be by addendum. Submittal of bid constitutes acceptance of existing conditions.

1.10 MISCELLANEOUS

- A. Items include, but are not limited to:
1. Maintain pedestrian and vehicular access to and around site.
 2. Do not encumber site access with materials or equipment.
 3. Obtain and pay for use of additional storage or work areas if needed for operations.

1.11 CONTRACTOR'S USE OF SITE

- A. The Contractor has direct responsibility for and control of the construction site for the duration of the Project, subject to the following:
1. Contractor's Use of Site: Limit use of the site for work, storage and access only as required to achieve work of this contract.
 2. Construction Facilities and Temporary Controls: Refer to Section 01 50 00.
 3. Emergency Vehicle Access: Maintain access roadway and fire lanes on site for use by emergency vehicles. Coordinate requirements with local authority having jurisdiction.
 4. Contractor's Materials / Equipment Staging Area: Limit storage of materials and equipment to within the staging area and Contractor occupied construction areas.
 5. Access Routes to Construction Areas: Contractor shall maintain site access routes in a clean and safe manner free of construction materials, debris and dirt.
 6. Public Safety: Contractor is responsible for performing a safety analysis and

implementing conclusions from their analysis and, for maintaining site in a manner which prevents any unsafe or potentially unsafe condition.

- a. Implement and enforce conclusions from safety analysis for duration of Project.
 - b. Maintain site in a manner that prevents any unsafe or potentially unsafe condition.
7. Protection of Existing: Protect existing roadways, utilities, etc. from damage or defacement; repair / replace any damage.
 8. Construction Areas: Monitor to prevent unauthorized vehicles and persons from entering site. After work hours leave Contractor's work area locked and all tools in locked toolboxes. Post "DANGER - KEEP OUT - CONSTRUCTION AREA" signs at building entries and around perimeter of construction areas.
 - a. Assume full responsibility for the protection and safekeeping of products under this Contract, stored on the site.

1.12 MATERIAL SAFETY DATA SHEETS

- A. Post Material Safety Data Sheets (MSDS) for hazardous materials on site in accordance with the Hazard Communications Standard, WAC 296-62-054 through -05427 (available from the State Department of Labor and Industries).
- B. Provide a bulletin board for hazard communications program in location accessible 24 hours a day and convenient to employees, subcontractors and their employees and representatives for Owner, Architect and other agencies that may visit Project site and come into contact with hazardous chemical substances.

1.13 CONSTRUCTION DOCUMENTS

- A. Contractor is responsible for posting any addendums in the Contract Drawings and Project Manual.

1.14 PERMITS

- A. Contractor shall abide by provisions of the authorities having jurisdiction (AHJ).

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Contract Modification Procedures, including:
 - 1. Supplemental Instructions.
 - 2. Construction Change Authorization.
 - 3. Documentation of Proposals and Claims.
 - 4. Change Orders.
 - 5. Distribution.

1.03 SUMMARY

- A. Requirements Include:
 - 1. Promptly implement change order and field order procedures.
 - a. Provide full written data required to evaluate changes.
 - b. Maintain detailed records of work done on a time-and-material/force account basis.
 - c. Provide full documentation to Architect on request.
- B. Related Requirements:
 - 1. Coordinate related requirements specified in other parts of Project Manual including but not limited to the following:
 - a. Change Orders / General Conditions (AIA A201), Article 7; Applications for Payment; Construction Schedules; Schedule of Values; Substitutions and Product Options; Project Record Documents.

2. Designate in writing the names of authorized members of Contractor's organizations who accept changes in the work and are responsible for informing other workers of the authorized changes.
3. Contractor agrees; Architect approves; Owner authorizes.

C. Definitions:

1. Change Order: See General Conditions (AIA A201) and Change Order Document (AIA G701).
2. Architect's Supplemental Instructions: Work order, instructions, or interpretations, signed by Architect making minor changes in the work not involving a change in Contract Sum or Contract Time.
3. Construction Change Authorization: Written order to the Contractor, signed by Owner, Architect and Contractor amending Contract Documents as described. This order authorizes Contractor to proceed with a change altering Contract Sum or Contract Time and is to be included in a subsequent Change Order.

D. Preliminary Initiation / Changes:

1. Changes may be initiated by Owner and Architect through a Proposal Request submitted to Contractor. Request will include:
 - a. Detailed description of Change, Products, and location of change in Project.
 - b. Supplementary or revised Drawings and Specifications.
 - c. Projected time span for making change.
 - 1) Statement as to whether overtime work is, or is not, authorized.
 - d. A specific period of time during which requested price will be considered valid.
 - e. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

E. Construction Change Authorization:

1. In lieu of Proposal Request, Architect may issue a construction change authorization for Contractor to proceed with a change for subsequent inclusion in Change Order.

2. Authorization describes work change additions and deletions, with attachments of revised Contract Documents to define details and designate any change in Contract Sum and Contract Time.
 3. Owner and Architect will sign and date as authorization to proceed with changes. General Contractor cannot be paid for the work until it is incorporated into a change order and signed by all parties.
 4. Contractor signs and dates to indicate agreement with terms.
- F. Documentation of Proposals and Claims:
1. Support each lump sum proposal quotation, and each unit price (not previously established) with sufficient substantiating data.
 2. On request provide additional data to support time and cost computations:
 - a. Labor Required; Hours, Hourly Rate.
 - b. Equipment Required.
 - c. Products Required.
 - 1) Recommended source of purchase and unit cost.
 - 2) Quantities required of each material.
 - 3) Material unit costs and extended price.
 - d. Taxes, Insurance, and Bonds.
 - e. Documented credit for work deleted from Contract.
 - f. Overhead and Profit. Article 7 Supplementary Conditions.
 - g. Justification for any change in Contract Time.
 3. Support each claim for additional costs, and time and material/force account work with documentation, as required for lump sum proposal. Include additional information:
 - a. Name of Owner's authorized agent who ordered work, and date of order.
 - b. Dates and times work was performed, and by whom.
 - c. Time record, summary of hours worked, and hourly rates paid.

- d. Receipts and invoices for:
 - 1) Equipment used, listing dates and times of use.
 - 2) Products used, listing of quantities.
 - 3) Subcontracts.
- 4. Document requests for substitutions for Products as specified.
- G. Preparation of Change Orders:
 - 1. Owner will prepare Change Orders.
 - 2. Change Order Form: AIA Document G701 or equivalent.
 - 3. Change Order provides accounting of any Contract Sum and Contract Time adjustment.
- H. Lump Sum / Fixed Price Change Order:
 - 1. Content of Change Orders will be based on, either:
 - a. Architect's Proposal Request and Contractor's responsible Proposal as mutually agreed between Owner and Contractor.
 - b. Contractor's Change Proposal, as recommended by Architect.
 - 2. Proper signatures (dated) authorize you to proceed with changes.
 - 3. Sign and date Change Order if you agree with terms.
- I. Unit Price Change Order:
 - 1. Content of Change Orders will be based on, either:
 - a. Definition of extent of required changes.
 - b. Contractor's Proposal for change, as approved with appropriate signatures.
 - c. Survey of completed work.
 - 2. The amount of unit prices is to be:
 - a. Any stated in the Bid Form / Agreement.

- b. Those mutually agreed upon between Owner and Contractor.
 - 3. When Change Order quantities can be determined prior to start of work:
 - a. Appropriate listed persons will sign and date as authorization for you to proceed.
 - b. Sign and date Change Order to indicate your agreement with terms.
 - 4. When quantities cannot be determined prior to start of work the following procedures will be followed:
 - a. Appropriately signed and issued construction Modification Proposal will authorize you to proceed on unit price basis, and cite applicable unit prices.
 - b. At completion of change, Architect will determine cost of work based on unit prices and quantities used.
 - 1) Submit documentation establishing any claims for Contract Time change.
 - c. Architect signs and dates the Change Order establishing change in Contract Sum and Contract Time.
 - d. All pertinent listed parties sign and date Change Order indicating their agreement.
- J. Time and Material / Force Account Change Order / Construction Change Authorization:
 - 1. Appropriately executed and signed Change Order authorizes you to proceed.
 - 2. At completion of change, submit itemized accounting and supporting data as provided in Article "Documentation of Proposals and Claims" of this Section.
 - 3. All concerned sign and date Change Order and/or Construction change authorization establishing change in Contract Sum and Contract Time.
 - 4. Contractor signs and dates indicating his agreement.
- K. Correlation with Contractor's Submittals:
 - 1. Quarterly revise Schedule of Values and Request for Payment forms to

record each change as a separate item of work. Record adjusted Contract Sum.

2. Monthly revise Construction Schedule reflecting each change in Contract Time.
 - a. Revise sub schedules to show changes for other items of work affected by changes.
 - b. Upon completion of work under Change Order, enter pertinent changes in Record Documents.

L. Distribution:

1. Send copies to all concerned parties.
 - a. Change Orders:
 - 1) Upon authorization, Owner transmits one signed copy each to Contractor and Architect.
 - b. Construction Change Authorization:
 - 1) Distribution of Copies:
 - a) One to Owner.
 - b) One to Contractor.
 - c) One to Architect.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 29 00

SCHEDULE OF VALUES AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Administrative and Procedural Requirements for the Schedule of Values and Payment Applications.

1.03 SUBMITTAL

- A. Submit the Schedule of Values in PDF format via email to the Architect for review.
 - 1. Transmit under transmittal letter. Identify Project by title and by contract number.

1.04 FORMAT

- A. Schedule of Values: Submit on AIA Document G703.
- B. For Specification Divisions 02 through 33 of the Project Manual follow the Table of Contents for minimum listing of schedule of values. Identify each line item by number and title of each specification section. Complex line items may be required to be listed in component parts of the line item.
 - 1. List material and labor costs on separate line items.
- C. For Specification Division 01 as a minimum include one line item for each of the following: mobilization, General Conditions, bonds and insurance, submittals, punch list correction, "record" drawings, O and M manuals, operation instructions and demobilization.
 - 1. Refer to the General Conditions of the Contract for limitations on mobilization and closeout line items

1.05 REQUIREMENTS

- A. These requirements are in addition to the requirements found in the General Conditions of the Contract.

- B. Two weeks prior to submission of first Application and Certificate for Payment, submit schedule of values for each project to Architect and Owner for review.
- C. List installed value of each major item of Work and each subcontracted item of Work as a separate line item to serve as a basis for computing values for Progress Payments; as a minimum, provide at least one line item for each specification section. Round off values to nearest dollar.
- D. List guarantees / warranties as separate line items for each type of work, such as roofing, painting, etc. Show the value of each of these on the Schedule of Values.
- E. For each major subcontract or work of a specification section, list materials and installation as separate line items.
- F. Where the value of a line item exceeds \$50,000, break down item by major products or operations as separate line items.
- G. Line item listings shall each include a directly proportional amount of Contractor's overhead and profit.
- H. For items on which payments will be requested for stored products, list subcontractor values for cost of stored products.
- I. Include separate line item for Project Closeout. Cost for this item shall be either one-half of the Contractor's mobilization cost or 5 percent of the total Contract Amount, whichever amount is greater.

1.06 APPLICATIONS FOR PAYMENT

- A. Applications for Payment: Submit on AIA Document G702.
- B. Preparation of Application for Each Progress Payment:
 - 1. Application Form:
 - a. Fill in required information.
 - 1) Include Change Orders approved prior to Application Submittal date.
 - 2) Fill in summary of dollar values to agree with respective total indicated on any continuation sheets.
 - 3) Sign by responsible officer of Contract firm.
 - 4) Sign all copies; no photocopies of signatures permitted.
 - 5) Indicate for each line item, the percentage of completion

as reflected in the dollar value of completed work.

2. Continuation Sheets:
 - a. Totally fill in all scheduled component work items. Show item number / scheduled dollar value / item / Schedule of Values.
 - b. Fill in dollar value in each column for each scheduled line item.
 - 1) Round off values to nearest dollar. Tally Sheet.
 - 2) If no work has been performed enter zero.
 - c. At end of continuation sheets, list each Change Order approved prior to submission date.
 - 1) List by Change Order Number, and description, as for an original component item of work.
- C. Post Addendums in field Specifications prior to first Progress Payment.
- D. Substantiating Data for Final Payment:
 1. When Owner or Architect requires substantiating data, submit suitable information, with cover letter.
 2. Submit one copy of data and cover letter for each copy of Application.
- E. Preparation of Application for Final Payment:
 1. Fill in application form, as specified, for progress payment.
 2. Use continuation-sheet for presenting final accounting statement, as specified: Project Closeout.
- F. Submittal Procedure:
 1. Submit Application for Payment at times stipulated in Agreement. Allow stipulated time for processing.
 2. Number: One (1) copy of each Application, unless otherwise directed at Pre-construction Meeting.
 3. When Architect finds Application properly completed and correct, they will transmit Payment Certificate to Owner.
 4. If Architect finds application improperly or incorrectly executed, an annotated copy is returned for NEW SUBMITTAL.

5. Submit revised Progress Schedule with each Application for Payment.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Administrative and Procedural Requirements for:
 - 1. Project Management.
 - 2. Coordination.
 - 3. Variations, Revisions and Clarifications.
 - 4. Preconstruction Conferences.
 - 5. Preinstallation Conferences.
 - 6. Progress Meetings.
 - 7. Coordination Meetings.

1.03 PROJECT MANAGEMENT

- A. General: Provide direct, effective, experienced, cooperative, team-oriented, hands-on management of the Work including the daily construction operations on the Project site and that part of the Work that the Contractor chooses to delegate to Subcontractors / Suppliers.
 - 1. Project management personnel shall be employees of the Contractor and shall not be subcontracted or delegated to others.
 - 2. Project requires a fulltime project manager, superintendent and project engineer.
- B. Submittals:
 - 1. Refer to Section 01 33 00 for submittal procedures.
- C. Superintendent: Employ a Project Superintendent (different person than the Project Manager) housed in a temporary office on the Project site to oversee, direct, and manage the construction of the Work and including, but not limited to, the following minimum characteristics and

responsibilities:

1. A good communicator, organized, effective and capable of managing multiple tasks, difficult personalities and tight deadlines without losing self- control or management effectiveness.
2. Trained, knowledgeable and experienced in job site safety and shall be responsible for managing safety issues on site in conformance with Federal, State and Local regulations.
3. Superintendent shall become thoroughly familiar with the requirements of the Contract Documents before work is started.
4. Responsible for executing the Work in conformance with the Construction Schedule specified in Section 01 32 00 so that Project is completed on time.
5. Oversee and direct the work of Subcontractors and suppliers and confirm they are conforming to the requirements of the Contract Documents.
6. Jointly with the Project Manager, coordinate the Work of this Project as specified under "Coordination" in this section.
7. Responsible for determining the means and methods used to execute the Work.
8. Responsible for coordinating Work requiring independent inspection with the testing agency(s).
9. Responsible for managing and controlling the quality of the Work (including work by Subcontractors) in conformance with the Contract Documents and good construction practice.
10. Responsible for coordinating with the Authority having jurisdiction and Building Inspector(s) inspections and requirements.
11. Responsible for coordinating with utility providers.
12. Responsible for coordinating the final inspections required by Authorities having jurisdiction required for issuance of the Certificate of Occupancy.
13. Responsible for inspecting the work jointly with the Project manager and preparing the Contractor's Punch List specified in Section 01 7800.
14. Provide a Daily Report for each day on which work is performed on the job site on the Daily Report Form included at the end of this section and submit to the Owner and Architect the next day.

- D. Project Engineer: Employ a Project Engineer to support the work in the field including, but not limited to, the following minimum project management tasks:
1. Provide any task(s) required to support the construction of the Work and facilitate a planned, orderly and timely management of the Work.
 2. Computer Skills: Experienced in using Microsoft Word, Excel, Adobe Acrobat (PDF files) e-mail, and whatever scheduling software is employed.
 3. Submittal Review: Manage the submittal process specified in Section 01 33 00 so that submittals are reviewed and materials / equipment ordered and delivered so as to avoid delay in the Project Schedule.
 - a. Review each submittal package for accuracy, completeness and conformance to the requirements of the Contract Documents.
 - b. Review submittals for the quantity of items, field dimensions, coordination with adjacent work, and coordination of information.
 - c. Apply Contractor's approval stamp to submittals before sending to Architect for review.
 - d. Pick up and deliver submittals when required to meet ordering deadlines.
 - e. Distribute submittals to Subcontractors and suppliers that have work that is affected by or requires coordination with the submittal.
 4. Coordination: Jointly with the Project Superintendent, coordinate the Work of this Project as specified under "Coordination" in this section.
 5. Field Engineering: Provide coordination drawing, field engineering and detailing services as required convert the design concept shown on the Drawings and specified into installation drawings required to construct the Work.
 - a. Drawings may be hand drafted or drafted in AutoCAD / Revit.
 - b. Maintain a file of completed drawings; enter pertinent data onto as- built drawings.
 - c. Provide copy of drawings to Architect upon request.

6. Field Quality Control: Manage the various aspects of quality control for the Project including the following:
 - a. Inspect materials and equipment daily as they are delivered on site for conformance to the requirements of the Contract Documents and reviewed submittals; provide written notification of any non-conforming items to Subcontractor / Supplier responsible with copy to the Architect.
 - b. Inspect, monitor and document the work in progress for compliance with the Contract Documents; provide written notification of any non-conforming Work to Subcontractor / Supplier responsible with copy to the Architect.
 - c. Monitor geotechnical engineer and testing agency inspections and reports, take appropriate action to resolve any non-conforming work.
 - d. Coordinate and monitor site visits and inspections by manufacturer's representatives; take appropriate action to resolve any non-conforming work or coordination issues.
7. RFI Coordination: Manage the preparation and distribution of RFI including the following:
 - a. Review field questions to determine if they require an RFI or field engineering / coordination by Contractor
 - b. Assign consecutive number to each RFI issued.
 - c. Maintain up to date log of each RFI issued, listing date sent, date answer received and who RFI was distributed to.
8. Preinstallation Conferences: Schedule and lead pre-installation conferences specified in various sections of the Specifications and any other work category that requires coordination or review of technical requirements.
 - a. Keep minutes of the conference and send out meeting minutes to attendees.
 - b. Document any decisions made that modify or amend the requirements of the Contract Documents.
9. As-Built Drawings: Manage the preparation of the as-built drawings specified in Section 01 78 00.
 - a. Coordinate Subcontractor as-built data incorporation into the as-built drawing set.

- b. Maintain up-to-date as-built drawing set in the field office for review by Architect and Engineers upon request or at monthly payment request review.
10. Operation and Maintenance Manual Coordination: Manage the information collection and preparation of the operation and maintenance manuals specified in Section 01 78 00.
11. Systems Start-Up / Shakedown: Coordinate the connection and testing of equipment / systems installed in the Project.
- a. Confirm each Subcontractor's work is completed and final connections / adjustments made.
 - b. Coordinate connection and testing by Subcontractor responsible for equipment / system.
 - c. Confirm proper operation of equipment / system including each different option, accessory and feature after start-up.
 - d. Prepare a list of deficiencies and uncompleted items for equipment / systems and distribute to the Subcontractors responsible with copy to the Architect; manage completion / correction in timely manner.
12. Punch List Review: Together with the Project Superintendent, inspect the completed Work and prepare the Contractor's Punch List of deficiencies in the Work specified in Section 01 78 00.
- a. Manage the timely completion of Contractor's Punch List items.
 - b. Submit copy of Contractor's Punch List showing that items have been satisfactorily completed when notifying Architect that work is substantially complete and ready for Architect's punch list review.
 - c. Manage the timely completion of Architect / Consultant Punch List items.
 - d. Provide written notification to Architect when deficiencies noted in Architect / Consultant Punch List have been completed.

1.04 COORDINATION

- A. General Coordination:
 - 1. Coordinate the Work of trades and other sections to ensure that elements of the work are installed in their proper sequence, without the need for unplanned modifications to the structure,

building systems or work already installed.

2. Provide direct coordination of the Work; do not delegate coordination responsibility to any subcontractor.
3. Plan out the Work in advance and anticipate the interrelationships between each subcontractor and their relationship to the overall Project.
4. Provide the leadership, direction and decisions necessary to prevent subcontractor and supplier problems and disputes from affecting the Project Schedule or the quality of the work.
5. Coordinate scheduling, submittals and work of the various sections of Specifications to assure proper, efficient and orderly sequence of preparation and installation of interdependent construction elements, with provisions for accommodating items installed later.
6. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
7. Coordinate completion and cleanup of Work of separate sections in preparation for Completion and for portions of the work designated for Owner's occupancy or use.
8. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

B. Site Utilities Coordination:

1. Coordinate utility connection work with each utility provider, including schedule, layout and any special requirements of the utility provider.
2. Coordinate the work of trades to assure proper fit and the proper operation of systems and equipment.
3. Coordinate space requirements and installation of utility work. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
4. Lay out, work through and resolve any conflicts or problems involving site utility work that share the same space or require a special sequence of installation prior to starting any fabrication or installation. Provide coordination drawings wherever needed to maintain control of the installation in areas involving numerous trades.

5. Leave adequate space for maintenance access, by a normal size maintenance man, to equipment and items without the need for special equipment or removal of items that block access.

1.05 VARIATIONS, REVISIONS AND CLARIFICATIONS

- A. Variations, revisions and clarifications to the work not involving an adjustment to the Contract Sum or Contract Time will be confirmed in writing. These written confirmations may be included in the Project minutes, memos to the Contractor and Owner, e-mail correspondence, or in answers to written Requests for Information (RFI).
- B. Requests for Information (RFI) shall be submitted on the RFI form attached at the end of this Section. This form must be completely filled out as applicable by the Contractor prior to submission. Submit RFI via e-mail.
- C. Requests For Information (RFI) shall be limited to a single subject and discipline, do not submit RFI with multiple unrelated questions.
- D. Adhere to the requirements of the General Conditions of the Contract for any variations, revisions and / or clarification to the work that the Contractor believes will involve a change in the Contract Sum or Contract Time.
- E. For Shop Drawing variations conform to requirements of the General Conditions of the Contract and Section 01 33 00.

1.06 PRECONSTRUCTION CONFERENCE

- A. Refer to Section 01 31 19.

1.07 PROGRESS MEETINGS

- A. Refer to Section 01 31 19.

1.08 PREINSTALLATION CONFERENCES

- A. Refer to Section 01 31 19.

1.09 COORDINATION MEETINGS

- A. Refer to Section 01 31 19.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

0.0 CUTTING AND PATCHING

.Execute cutting and patching Work and structural reinforcing in a manner to prevent damage to other Work and to provide proper surfaces for installation of repairs, penetrations through surfaces, or other items.

- A. For all new Work employ original installer or fabricator to perform cutting and patching for weather exposed or moisture resistance elements, fireproofing, and finished surfaces exposed to view.
- B. Provide cutting and patching for all existing work, where mechanical and electrical utilities or similar services extend beyond limits of work for new construction, to match existing.
- C. General: Provide and be responsible for all cutting, fitting, and patching required to complete the Work, or to:
 - 1. Make its several parts fit together and to provide for installation of ill-timed Work.
 - 2. Uncover portions of Work to provide for installation of ill-timed Work.
 - 3. Remove and replace defective Work.
 - 4. Remove and replace Work not conforming to Contract Document requirements.
 - 5. Remove samples of installed Work as specified for testing.
 - 6. Provide routine penetrations on non-structural surfaces for installation of piping.
- D. Project Conditions:
 - 1. Inspect existing conditions including elements subject to damage or movement during cutting and patching.
 - 2. After uncovering Work, inspect conditions affecting installation of products or performance of Work.
 - 3. Report unsatisfactory or questionable conditions to Architect in writing. Do not proceed with Work until Architect provides further instructions.

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Project Meetings, including:
 - 1. Preconstruction Conferences.
 - 2. Progress Meetings.
 - 3. Preinstallation Conferences.
 - 4. Coordination Meetings.

1.03 PRECONSTRUCTION CONFERENCE

- A. Schedule a preconstruction conference before starting construction, at a time convenient to the Owner and the Architect, but no later than 10 days after execution of the Agreement. Hold the conference at the Project Site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: Authorized representatives of the Owner, Architect, and their consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress, including the following:
 - 1. Designation of personnel representing the parties in Contract and the Architect.
 - 2. Discussion of list of Subcontractors, list of Products, schedule of values and progress schedule.
 - 3. Procedures and processing of field decisions, submittals, substitutions,

applications for payments, proposal request, Change Orders and Contract closeout procedures.

4. Scheduling.
5. Coordination with Owner.
6. Testing and inspection coordination.
7. Procedures for maintaining record documents.
8. Requirements for start-up of equipment.
9. Inspection and acceptance of equipment put into service during construction period.
10. Contractor Safety.

1.04 PROGRESS MEETINGS

- A. Conduct progress meetings at the Project Sites at regular intervals. Notify the Owner and the Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.
- B. Attendees: In addition to representatives of the Owner and the Architect, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.
 1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
 2. Review the present and future needs of each entity present, including the following:
 - a. Approval of minutes of previous meetings.
 - b. Review of Work progress since previous meeting.

- c. Review work planned.
 - d. Review Project Schedule (4-week and Master CPM Schedule).
 - e. Review submittal schedules; expedite as required.
 - f. Review of Request for Information (RFI).
 - g. Review deliveries.
 - h. Review proposed changes.
 - i. Review technical and administrative questions / concerns from Contractor, Owner, Architect, Consultants.
 - j. Update on Building Dry Out Progress.
 - k. Review As-Built Drawings.
 - l. Field Observations.
- D. Four-Week Schedule:
- 1. Prior to each meeting, prepare a four (4) week schedule showing work completed during the previous week, work that is in progress for the current week and work planned for the following two weeks. This four week schedule, which is revised weekly by the Contractor, will be presented by the Contractor at the progress meeting and a copy will be given to the Architect and to the Owner at that time.
 - 2. In the event that a progress meeting is not scheduled for the current week, prepare the 4 week schedule and forward it to the Architect in the same week.
- E. Building Dry Out Data Logs: Review building dry out progress and provide copies of the previous week's data logs for building environmental conditions, moisture content of materials tested in accordance with requirements of Section 01 73 43.
- F. Reporting:
- 1. Architect will administer the meeting, record decisions and actions from the meeting and send copies of meeting notes to Owner and Contractor.
 - 2. The Contractor will be responsible to distribute copies to his field representative and to Subcontractors.
 - 3. Schedule Updating: Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been

made or recognized. Issue the revised schedule concurrently with the report of each meeting.

1.05 PREINSTALLATION CONFERENCES

- A. When required in individual specification section or when Owner, Architect or Contractor determines the need, the Contractor shall convene a pre-installation conference at work site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Owner and Architect seven calendar days in advance of meeting date.
- D. Prepare agenda, preside at conference, record minutes and distribute copies within two days after conference to participants.
- E. Review conditions of installation, preparation and installation procedures, and coordination with related work.
- F. Schedule pre-installation conferences to occur immediately before or after the agreed on day / time for progress meetings.

1.06 COORDINATION MEETINGS

- A. Conduct project coordination meetings at regular intervals convenient for all parties involved. Project coordination meetings are in addition to specific meetings held for other purposes, such as regular progress meetings and special preinstallation meetings.
- B. Request representation at each meeting by every party currently involved in coordination or planning for the construction activities involved.
- C. Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 32 00

CONSTRUCTION SCHEDULES AND REPORTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Progress Schedules and Reports, including:
 - 1. Submittal Procedures.
 - 2. Contractor's Construction Schedule.
 - 3. Submittal Schedule.
 - 4. Special Reports.

1.03 SUBMITTALS

- A. Prepare and submit proposed Construction Schedule to Owner and Architect as soon as possible after Notice to Proceed and prior to first Application for Payment.
 - 1. Submit schedule in both paper and digital computer formats acceptable to the Owner.
- B. Submit updated schedule with each Application for Payment or more frequent if required.
- C. Applications for Payment will not be processed until schedule is in conformance with requirements of the specifications.

1.04 DISTRIBUTION

- A. Distribute copies of Construction Schedule to project site file, subcontractors, suppliers, Owner, Architect and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.
- C. Construction Office: Post a copy of the current Construction Schedule on the wall in the construction office where the job meetings will be held; suspend a moveable vertical line on the current date to facilitate review and discussion of schedule progress and issues at weekly job meetings.

1.05 GENERAL

- A. The intent of the Construction Schedule is to assist the Contractor in planning and execution of the Work in a timely manner and assist the Contractor, Architect and Owner in monitoring the construction progress for the purpose of coordination, communication, evaluation of Applications and Certificates for Payment, and evaluation of time extension requests.
- B. This section supplements the General Conditions and Special Conditions with additional schedule requirements, where conflicts exist, the most restrictive requirement shall govern.
- C. Any plan by the Contractor to complete the Work or any part of the Work earlier than any contract required milestone or specific completion date shall not be construed as creating any responsibility or liability for the Owner or Architect should their actions, or lack thereof, prevent the Contractor from achieving the planned early completion. The Owner and Architect shall not be liable to the Contractor for any costs or other damages if the Contractor is unable to achieve early completion of the Work before a milestone or completion date.
- D. Float Time: Float time is the amount of time between the earliest start date and the latest start date, or between the earliest finish date and the latest finish date of a chain of activities on the CPM Schedule. Float time belongs to the Project and is not for the exclusive use or benefit of either the Contractor or the Owner; float time may be used by either the Contractor or Owner for offsetting delays. Use of float suppression techniques such as preferential sequencing, special lead / lag logic restraints, zero total or free float constraints, extended activity times or imposed dates shall be cause for rejection of the Construction Schedule or any revisions or updates.
- E. Scheduling Personnel: Contractor's shall employ scheduling personnel or consultant with a minimum of 5 years of experience using the proposed scheduling software on projects of similar size and scope. If requested, provide a list of scheduling experience with copies of the schedules.
- F. Schedule shall anticipate and include sufficient float time for weather dependent work tasks to allow for any delays due to normal inclement weather (defined as any inclement weather within the ten-year average of accumulated record mean values from climatological data compiled by the National Oceanic and Atmospheric Administration (NOAA), for the locale of the Project, over the full duration of the Contract Time).

1.06 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Construction Schedule:
 - 1. Schedule Methodology: Critical Path Method (CPM) for the planning, scheduling and reporting of the work required by this contract.
 - 2. Schedule Type: Precedence Diagramming Method (PDM).

3. Acceptable Software Programs:
 - a. Microsoft Project.
 - b. Primavera Project Planner.
 4. Schedule Sheet Size: 11-inches x 17-inches preferred if readable, no larger than 24-inches x 36-inches.
 5. Schedule Contents: Schedule shall contain the following information:
 - a. Task ID number (numbered in ascending order, (e.g. 1, 2, 3, 4, etc.)
 - b. Task Name (activity), provide a two or three word description of each activity; identify each activity with the applicable Specification Section number (e.g. *Carpet – 09 68 00*).
 - c. Task Duration (e.g. *10 days*).
 - d. Early Task Start Date (e.g. *Mon 7/22/20*).
 - e. Late Task Start Date (e.g. *Mon 7/29/20*).
 - f. Early Task Finish Date (e.g. *Mon 7/22/20*).
 - g. Late Task Finish Date (e.g. *Mon 7/29/20*).
 - h. Float Time (e.g. *7 days*).
 - i. Predecessor Tasks.
 - j. Successor Tasks.
 - k. Calendar: List the Weeks, Months and Year(s) across top of each page of the schedule. Show a graphic task duration bar indicating the start and finish date corresponding to the calendar for each task.
- B. Schedule Requirements: Include the following requirements:
1. List every work activity required to complete the Work in the Task Name column and include the following:
 - a. Task Name shall describe individual work activities in a defined area of the Project, not multiple work activities for the entire project, e.g. *underslab plumbing rough-in – west wing* instead of *plumbing* for the entire project. Provide as many activities as necessary to clearly show how the Project will be constructed within the time allowed.

- b. Include completion and milestone dates as specified in Section 01 10 00.
 - c. Include dates for submission of each submittal to Architect for review as required to assure materials / products / systems will be on site when required to allow conformance to the Project completion and milestone dates. When Architect's review time is critical to the Project completion schedule, identify the review return dates in the schedule.
 - d. Indicate date required for selection of colors and finishes as applicable.
 - e. Include product delivery dates, including those furnished and / or installed by separate contractors or the Owner.
 - f. Show dates when application for separate permits (i.e. fire alarm, fire sprinkler, etc.) will be made and when permit will be received.
 - g. Include dates for Contractor's Punch List review and Contractor's completion of punchlist items.
 - h. Include dates for Architect's Punch List review and Contractor's completion of punchlist items.
 - i. Show dates for pre-cover inspections and final inspections required by authorities having jurisdiction.
 - j. Include dates for preparation and submission of operation and maintenance manuals and project record drawings (minimum of 30 days before final completion). Show Architect's review time and resubmittal of corrected manuals and drawings.
2. Keep individual tasks listed to short durations with limited scope of work (one to two weeks maximum) unless the task is dependent on several activities of longer duration.
 3. Each task shall have a corresponding time duration bar to the right of the columns graphically showing the duration of each activity on the calendar.
 4. Show complete sequence of construction by activity, identifying work of separate contractors or Owner required to complete the Work.
 5. Graphically indicate each task that is on the critical path for completion (by color or pattern) on the task duration bar. Show the interrelationship of each critical path task to other critical path tasks by drawing arrows between the task duration bar finish and start points.
 6. Include sufficient additional float time in the duration of those specific

activities that are weather dependent (such as: underground utilities, pavement, painting, etc.) to prevent delaying critical path activities due to normal inclement weather based on the time of year the tasks are being accomplished and the corresponding historic weather data averages for those dates.

- a. Weather related float time shall be calculated after late task finish date and shall be included in the critical path time calculation.
- b. Identify additional weather-related time allowed in the duration or include as a separate task directly under the affected work task.

1.07 UPDATING SCHEDULES

- A. Update the Construction Schedules monthly to reflect actual work activity dates accomplished and any revised work activity dates.
- B. Maintain Construction Schedules to record actual start and finish dates of activities as they are completed.
- C. Indicate progress of each activity at the time of the revision date. Update diagrams to graphically depict current status of Work.
- D. Indicate revision date on revised schedule.
- E. Show changes occurring since previous Schedule submission such as:
 1. Any major changes in scope;
 2. Activities modified since previous submission;
 3. Revised projections for progress and completion, as applicable;
 4. Any other identifiable changes.
- F. Provide narrative report as needed to define:
 1. Problem areas; anticipated delays; and impact on schedule.
 2. Corrective action to be taken by the Contractor to get the Project back on schedule. This report will define how and when the Contractor will accomplish this.

1.08 RECOVERY SCHEDULE

- A. Whenever completion of any critical path activity(s) extends beyond its late finish date or in any way jeopardizes timely completion of a Contract milestone date or completion date the Contractor shall prepare a recovery schedule showing how work activity start and finish dates will be revised to allow the completion of milestone and completion dates on schedule.

- B. Recovery schedule shall be prepared as soon as possible after discovery of any delay affecting critical path activity(s), but not longer than 7 days.

1.09 SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's Construction Schedule, prepare a complete schedule of submittals. Submit the schedule within 2 days of the date required for submittal of the Contractor's Construction Schedule.
 - 1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values and the list of products as well as the Contractor's Construction Schedule.
- B. Prepare the schedule in chronological order. Provide the following information:
 - 1. Scheduled date for the first submittal.
 - 2. Related Section number.
 - 3. Submittal category.
 - 4. Name of the subcontractor.
 - 5. Description of the part of the Work covered.
 - 6. Scheduled date for resubmittal.
 - 7. Scheduled date for the Architect final release or approval.
- C. Distribution: Following the Architect's response to the initial submittal, print and distribute copies to the Architect, Owner's representatives, subcontractors, and other parties required to comply with submittal dates indicated.
 - 1. Post copies in the Project meeting room and temporary field office.
 - 2. 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 part of the Work and are no longer involved in construction activities.
- D. Schedule Updating: Revise the schedule after each meeting or other activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.
- E. Field Correction Reports: When the need to take corrective action that requires a departure from the Contract Documents arises, prepare a detailed report. Include a statement describing the problem and recommended changes. Indicate reasons the Contract Documents cannot be followed. Submit a copy to the Architect immediately.

1.10 SPECIAL REPORTS

- A. General: Submit special reports directly to the Owner's representatives within one day of an occurrence. Submit a copy to the Architect and other parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at the site, prepare and submit a special report. List the chain of events, persons participating, response by the Contractor's personnel, an evaluation of the results or effects and similar pertinent information. Advise the Owner's representatives in advance when such events are known or predictable.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 32 33
CONSTRUCTION PHOTOGRAPHS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Construction photography of work-in-progress and concealed as-built construction.

1.03 GENERAL

- A. Provide photographs taken from locations coordinated with Owner's Representative.
- B. Photographer: Experienced in taking construction photography.
- C. Equipment: Photos shall be taken with digital camera equipment capable of meeting image size requirements listed below. Utilize a full range of lenses including wide angle and telephoto as appropriate.
- D. Video images may be acceptable for certain operations. Confirm with Project Manager.

PART 2 - PRODUCTS

2.01 CONSTRUCTION PHOTOGRAPHS

- A. Provide CD's containing photographs of construction progress on a monthly schedule.
- B. Provide photographs in the form listed below.

2.02 PHOTOGRAPHIC SUBMITTALS

- A. Photographs shall be provided on a compact disc (CD) or via a method agreed to by the Architect, Owner and Contractor.

- B. Minimum JPEG image size shall be 1280 X 960 pixels.
- C. Photographs shall be representative of project progress, showing major work and critical concealed conditions.
- D. Submit each month's photographs with each monthly application for payment and schedule update.
- E. Label photograph files with project name and date of submittal. Each photograph shall be dated, labeled and be provided with a brief description identifying the location and direction the photo was taken. Date stamp using month / date / year format.

PART 3 - EXECUTION

3.01 CONSTRUCTION PHOTOGRAPHS

- A. Take construction photographs beginning at Notice to Proceed and continuing through Substantial Completion.
- B. Take minimum of 50 photographs each month. Take additional photographs as needed to fully document the Work. Document the following with photographs:
 - 1. As-built concealed conditions that may benefit the Owner's future maintenance and operations activities. Take photographs (with a reference point) prior to cover or concealment.
 - 2. Underground pipe arrangements / valves / structures.
 - 3. Under-slab utility rough-in.
 - 4. Wall cavity utility routing prior to cover, take sequential photos of each length of framed wall after mechanical and electrical rough-in is completed.
 - 5. Above ceiling installation after ceiling support system installed, but prior to cover.
 - 6. Exterior elevations from each side / facet of building, take a series of photos from the same location each month.
 - 7. Site work, take a series of photos from the same location each month.
- C. The photograph record described above shall be considered minimum and shall not be deemed to limit the quantity or quality of the

photographic record.

END OF SECTION

SECTION 01 33 00

SUBMITTALS AND SHOP DRAWINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Administrative and Procedural Requirements for Project Submittals.

1.03 ADMINISTRATIVE SUBMITTALS

- A. 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, the following:
 - 1. Permits.
 - 2. Applications for Payment.
 - 3. Performance and Payment Bonds.
 - 4. Insurance Certificates.
 - 5. List of Subcontractors.

1.04 SUBMITTAL PROCEDURES

- A. Schedule submittals to expedite the Project. Transmit submittals in accordance with Construction Schedule and in such sequence to avoid delay in the Work. Coordinate submission of related items with schedule.
- B. Electronic Submittals – Format: Shop Drawings, Product Data, Certificates, Warranties and any similar submittals, other than physical samples, shall be provided as digital submittals in PDF format suitable for sending via electronic mail or downloaded from internet file transfer website.
 - 1. Submittal shall be submitted as one PDF and each item bookmarked to allow for efficient review.
 - 2. Organize submittals per specification section. Include all items listed in each specification section to facilitate one review by the Design team per specification section.
 - 3. PDF security permissions shall be formatted to allow printing, reviewing

and editing functions by Architect and Owner using any PDF compatible computer program.

4. When electronic submittals are required to be accompanied by a physical sample, the submittal will not be returned until both the electronic submittal and physical sample are reviewed.

C. Contractor Shall:

1. Review submittal for completeness before sending to Architect for review. Submittal shall have each of the items noted under the Submittals section in each specification section (Product Data, Drawings, Samples, Certifications, etc.).
 - a. Incomplete submittals will be returned "Not Reviewed" by Architect.
2. Review and approve each submittal prior to submission to Architect.
3. Include a review priority for Architect if multiple and / or large submittals are transmitted to Architect in the same week.
4. Reproduce and distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions. Pay all costs for reproduction, distribution and materials.
5. Coordinate submittals into logical groupings to facilitate inter-relation of the several items:
 - a. Finishes which involve Architect selection of colors, textures or patterns.
 - b. Associated items which require correlation for efficient function or for installation.
6. Identify, in writing, variations from Contract Documents and product or system limitations which may be detrimental to successful performance of the completed Work.
7. Accompany submittals with transmittal letter containing:
 - a. Date.
 - b. Project title and number.
 - c. Contractor's name and address.
 - d. Number of copies of Shop Drawings, Product Data and Samples submitted.
 - e. Identification of submittal as it relates to:

- 1) Subcontractor / Supplier / Manufacturer:
 - Name.
 - Address.
 - Telephone number. Representative's name.
 - 2) Detail number and location in Construction Documents.
 - 3) Specification reference number and paragraph.
 - 4) Applicable Standards.
 - 5) Finishes.
 - 6) Identification of deviations from Contract Documents.
- D. Additional Information Required:
1. Relation to adjacent structure or materials.
 2. Fabrication methods, assembly, special installation requirements, accessories, fasteners and other pertinent information.
 3. Field dimensions, clearly identified.
 4. Coordination with other trades. Stamped and signed by affected trades.
- E. Distribution:
1. Send submittals to Architect via electronic mail or from internet file transfer website.
 2. Architect will return reviewed submittals to Contractor and Owner via electronic mail or Architect's internet file transfer system.
 3. Send copy of Architect reviewed submittal to Subcontractors / Suppliers.

1.05 SUBCONTRACTOR AND SUPPLIER LIST

- A. Prior to submission of First Application for Payment, submit complete list of subcontractors and suppliers to be used for the Work. Provide specification section identification number, addresses and telephone numbers for each listed subcontractor and supplier providing materials.

1.06 SHOP DRAWINGS

- A. Present in clear and thorough manner. Title each drawing with Project name and number; identify each element of drawings by reference to sheet number and detail, schedule or room number of Contract Documents.

- B. Identify field dimensions; show relation to adjacent or critical features or Work or products.
- C. Do not submit freehand drawings or hand drafted drawings.
- D. Shop Drawings requiring Code Agency Approval: Submit on format and media required by Approval Agency. Include information required by Project Documents and Approval Agency.

1.07 PRODUCT DATA

- A. Submit only pages which are pertinent; mark each copy of standard printed data to identify pertinent products, referenced to Specification Section and Article number. Show reference standards, performance characteristics and capacities; wiring and piping diagrams and controls; component parts; finishes; dimensions; and required clearances.
- B. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the Work. Delete information not applicable.

1.08 SAMPLES

- A. Submit two samples of the specified color and texture for each product unless specified otherwise in individual specification sections; samples will be retained by Architect.
- B. Where a specific color has not been specified, submit full range of manufacturer's standard and special finishes except when more restrictive requirements are specified, indicating colors, textures and patterns, for Architect selection.
- C. Label each sample with identification required for transmittal letter.
- D. Field samples are to be maintained at the site of the Work and are to be removed after substantial completion unless directed otherwise.

1.09 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit manufacturer's certificate to Architect for review.
- B. Indicate material / product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits and certifications as appropriate.
- C. Certificates may be recent or previous test results on material / product, but must be acceptable to Architect / Engineer.

1.10 CALCULATIONS

- A. When specified in individual specification sections, submit calculations to

Architect for review.

1.11 CONTRACTOR REVIEW

- A. Coordinate submittals with requirements of the Work and Contract Documents.
- B. Apply Contractor's stamp with signature. The submittal signed by the Contractor certifies that the Contractor has reviewed the submittal for accuracy, completeness and compliance with the Contract Documents. It also certifies that the Contractor has verified products required, field dimensions, adjacent construction work, and coordination of information, in accordance with the requirements of the Work and Contract Documents. Submittals without Contractor's stamp and signature are rejected. Notify Architect in writing at time of submittal, of any deviations from requirements of Contract Documents.

1.12 RESUBMITTALS

- A. Revise and resubmit submittals as required, identify changes made since previous submittal.
- B. Shop Drawings, Product Data and Calculations:
 - 1. Revise initial drawings, data or calculations and resubmit as specified for the initial submittal.
 - 2. Indicate any changes which have been made including those requested by the Architect.
- C. Samples: Submit new samples as required.
- D. Architect reserves the right to charge the Contractor for reviewing non-responsive resubmittals.

1.13 ARCHITECT REVIEW

- A. Architect or their consultant(s) will review shop drawings, product data, calculations and samples and return submittals to Contractor.
- B. Architect's review is qualified by the following language included on the review stamp: "This review is only for general conformance with design concept of the Project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve the Contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of his or her Work with that of all other trades; and for performing all work in a safe and satisfactory manner".
 - 1. Any action shown is subject to Contract Document's requirements.

Architect will mark the review submittal in one of the following boxes on review stamp:

- Reviewed
- Furnish as Corrected
- Rejected
- Revise and Resubmit
- Submit Specified Item

- C. Architect / Engineer review of individual or separate items does not constitute review of assembly in which it functions.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Regulatory Requirements.

1.03 APPLICABLE CODES AND STANDARDS

- A. Any specific reference in the Specifications to codes, regulations, reference standards, manufacturer's instructions or requirements of regulatory agencies shall mean the latest printed edition of each in effect at the date of submission of bids unless the document is shown dated.
- B. Perform the Work in conformance with the applicable requirements of all regulatory agencies including, but not limited to, the following:
 - 1. International Building Code (IBC) 2021
 - 2. National Electrical Code (NEC) Current
 - 3. Uniform Plumbing Code (UPC) 2021
 - 4. International Mechanical Code (IMC) 2021
 - 5. Washington State Non-Residential Energy Code 2021
 - 6. Washington State Ventilation and Indoor Air Quality Code 2021
 - 7. Washington State Regulations for Barrier-Free Facilities Current
 - 8. Americans with Disabilities Act (ADA) Current

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 42 00

REFERENCES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. References, including:
 - 1. Abbreviations.
 - 2. Symbols.
 - 3. Definitions.

1.03 ABBREVIATIONS

- A. The following abbreviations of organizations may be used in the Contract Documents.

AAMA	Architectural Aluminum Manufacturer's Association
ACI	American Concrete Institute
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
ANSI	American National Standards Institute
APA	American Plywood Association
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society

AWI	Architectural Woodwork Institute
BHMA	Builder's Hardware Manufacturers Association
CLFMI	Chain Link Fence Manufacturers Institute
CRSI	Concrete Reinforcing Steel Institute
CS	U.S. Commercial Standard
DHI	Door and Hardware Institute
FGMA	Flat Glass Marketing Association
FM	Factory Mutual System
FS	Federal Specification
GA	Gypsum Association
IBC	International Building Code
ICC	International Code Council
MLSFA	Metal Lath / Steel Framing Association
NAAMM	National Association of Architectural Metal Manufacturers
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association; National Forest Products Association
NWMA	National Woodwork Manufacturers' Association
NWWDA	National Wood Window and Door Association
PCI	Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PS	U.S. Product Standard
SDI	Steel Deck Institute; Steel Door Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.

SSPC	Steel Structures Painting Council
TCA	Tile Council of America
TPI	Truss Plate Institute
UL	Underwriters' Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
WABO	Washington Association of Building Officials
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
WWPA	Western Wood Products Association

1. Additional abbreviations, used only on the Drawings, are listed thereon.

1.04 SYMBOLS

- A. Symbols, used only on the Drawings, are shown thereon.

1.05 DEFINITIONS

- A. Terms used on the Drawings or in the Specifications in addition to those shown in General Conditions shall have the following meanings:

TERM	MEANING
As Directed	"By the Architect"
As Required	"By Code; by good building practice; by the condition prevailing; by Contract Documents; by Owner, or by Architect"
As Selected	"By Architect"
Equal	In the opinion of the Architect. The burden of proof of equality is the responsibility of the Contractor.
Furnish	"Supply and deliver to the Project ready for installation and in operable condition."
Install	"Incorporate in the Work in final position, complete, anchored, connected, and in operable condition."
NIC	Not in Contract

Project	Total construction of which Work performed under the Contract Documents may be the whole or a part.
Provide	"Furnish and install complete." When neither "furnish", "install", nor "provide" is stated, "provide" is implied.
Shown	"As indicated on the Drawings"
Specified	"As written in the Project Manual"

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Administrative and Procedural Requirements for Project Quality Control.

1.03 REFERENCES

- A. Conform to the requirements of the referenced standards referred to in individual specification sections. Reference standards shall be the edition current as of the date of the Contract Documents.
- B. Obtain copies of reference standards that govern work performed on site.
- C. Should specified reference standards conflict with Contract Documents, the most stringent and restrictive requirement shall prevail except where Architect / Engineer provides other direction; request clarification from Architect before proceeding.
- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.
- E. Americans with Disabilities Act (ADA).
- F. ICC / ANSI A117.1 – Accessible and Usable Buildings and Facilities.

1.04 CONTRACTOR'S QUALITY ASSURANCE / CONTROL OF CONSTRUCTION

- A. Employ / assign quality control personnel to monitor the work of this project for conformance to the requirements of the Contract Documents and to good construction practices.
 - 1. Prior to starting their work, review the scope of work, performance requirements, materials and workmanship requirements with each trade and subcontractor.
 - 2. Review materials when delivered to the site for conformance to the Contract Documents and submittals.
 - 3. Monitor work in progress for conformance to the Contract Documents

and submittals.

- B. Contractor is solely responsible for managing and controlling the quality of the work and conformance with the requirements of the Contract Documents.
- C. Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship, to produce Work of specified quality.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Work shall be performed by trained and experienced workers qualified to produce workmanship of specified quality.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion and disfigurement.
- G. Inspections and reports issued by special inspector or testing laboratory do not relieve the Contractor from his responsibility to construct Work in conformance with the requirements of the Contract Documents.
- H. Contractor is responsible to review and confirm that substrate construction, site conditions and work by others complies with requirements of Contract Documents and manufacturer's requirements for subsequent work prior to installation or cover.

1.05 ACCESSIBILITY REQUIREMENTS

- A. Accessibility Requirements: The accessibility requirements shown on the Drawings are required for conformance with the Americans with Disabilities Act (ADA) and ICC / ANSI A117.1. Strict conformance with the accessibility requirements shown on the Drawings is required for this project; non-conforming work will require correction at Contractor's expense.
 - 1. A copy of ICC / ANSI A117.1 shall be kept on the jobsite for reference during construction and reviewed to provide a full understanding of each accessible design requirement.
 - 2. Construction Tolerances: Typical construction tolerances common to the construction industry are not acknowledged or permitted by the Americans with Disabilities Act (ADA) and ICC / ANSI A117.1. Therefore, Work must be constructed within the strict accessibility requirements without any allowable construction tolerances.
- B. Submittal Review: Review submittals for conformance with the accessibility requirements of ICC / ANSI A117.1 shown on the Drawings; mark up submittals that have incorrect or missing accessibility requirements.
- C. Review with Workers: Review the accessibility requirements of ICC / ANSI A117.1 and the Drawings with workers performing work that is required to conform to the accessibility requirements of ICC / ANSI A117.1.

- D. Monitoring: Monitor the work of this project for compliance with the accessibility requirements of ICC / ANSI A117 shown on the Drawings.
- E. Inspection: Inspect the completed work that is required to conform to accessibility requirements for conformance with ICC / ANSI A117.1. Inspection shall require accurate measurements to confirm that dimensions, slopes and relationships shown on the Drawings have been constructed in accordance with accessibility requirements.

1.06 FIELD SAMPLES

- A. Install field samples at the site as required by individual specifications sections for review.
- B. Acceptable samples represent the quality level of the Work.

1.07 MOCK-UP

- A. Provide where specified.
- B. Assemble and install specified items, with specified attachment and anchorage devices, flashings, seals and finishes. Install complete full scale mock-up of assembly at project site.
- C. Where mock-up is not a permanent part of the construction, remove at agreed upon time. Do not remove mock-up without Architect's approval.

1.08 INSPECTION AND TESTING AGENCY SERVICES

- A. Owner will appoint, employ and pay for services of an independent inspection and testing agency to perform inspection and testing.
- B. The inspection and testing agency will perform inspections, tests and other services specified in individual specification sections, as noted on the Structural Drawings and as required by the Owner or Architect.
- C. Reports will be submitted by the inspection and testing agency to the Authority Having Jurisdiction, Architect, Engineer, Contractor and Owner, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- D. Contractor's Responsibilities:
 - 1. Cooperate with inspection and testing agency personnel and facilitate their inspection / testing work on the project site.
 - 2. Coordinate the work and inspection / testing schedule directly with inspection and testing agency.
 - 3. Notify inspection and testing agency and Architect 24 hours minimum prior to expected time for operations requiring inspection / testing.

4. Furnish inspection and testing agency with reviewed submittals, including concrete design mix, etc.
 5. Furnish safe access to the work requiring testing / inspection, samples of materials, equipment, tools, storage, electrical power and assistance as requested.
 6. Make arrangements with inspection and testing agency and pay for additional samples and tests required for Contractor's use.
 7. Correct / replace any work found by the inspection and testing agency to be not in conformance with the Contract Documents.
- E. Site visits and retesting required because of scheduling problems caused by the Contractor and / or non-conformance to specified requirements shall be performed by the same inspection and testing agency. Payment for retesting will be charged to the Contractor by deducting inspection or testing charges from the Contract Sum
/ Price.

1.09 MANUFACTURER'S FIELD SERVICES AND REPORTS

- A. When specified in individual specification sections or when required by field installation problems, questions or concerns, require material or product suppliers or manufacturers to provide qualified staff personnel to visit the jobsite and provide technical consultation, observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable, and to initiate instructions.
- B. Representative to submit written report to Architect describing testing observations and recommendations. Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions shall also be included.
- C. Submit report in duplicate within 30 calendar days of observation to Architect for review.

1.10 MANUFACTURER'S INSTRUCTIONS

- A. Comply with manufacturer's installation / assembly instructions in full detail, including each step in sequence.
- B. Substrates, Site Conditions and Work By Others shall conform to manufacturer's requirements:
 1. Inspect substrate, site conditions and work by others for conformance to manufacturer's requirements for material and condition prior to starting any work.
 2. Do not start work if substrate construction, site conditions or work by others does not comply with manufacturer's recommendations; report any

problems to Contractor and Architect.

3. Start of work / installation indicates installer's acceptance of substrate, site conditions and work by others as meeting manufacturer's requirements.
- C. Should manufacturer's instructions conflict with Contract Documents, request clarification from Architect before proceeding.

1.11 MANUFACTURER'S CERTIFICATES

- A. When required in individual specification sections, submit manufacturer's certificate. Refer to Section 01 33 00, paragraph entitled "Manufacturer's Certificates."

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

A. GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Divisions 0 and 1 Specification Sections, apply to work of this Section.

1.02 SECTION INCLUDES

- A. This Section specifies administrative and procedural requirements for the Contractor's construction facilities and temporary controls.

1.03 DESCRIPTION

- A. This Section specifies minimum actions required. Other actions may be specified elsewhere in the Contract Documents, manufacturer's literature, and governing regulations.
- B. Nothing in this Section is intended to limit types or amounts of construction facilities and temporary controls.
- C. No omission from this Section will be recognized as a temporary activity that is not required to complete the Work.

1.04 DISPOSAL OF WASTE MATERIALS

- A. Dispose of all refuse and waste material, including excess earth from excavation, off Owner's property in a legal manner conforming to all requirements of local authorities having jurisdiction. Do not stockpile waste material on Owner's property. Immediately clean up any spilled material.
- B. Clean all trash and debris from work area daily. Keep work area, site, and adjacent properties free from accumulations of waste materials, rubbish and windblown debris resulting from construction operations.
- C. This location is in an area with the potential of roaming and foraging large animals. It is highly suggested that any containers that might contain waste food products be removed from the site daily. For other project waste; Provide on-site containers for collection of waste materials, debris and rubbish. Periodically remove waste from the site. Do not use Owner's waste containers for construction waste.
- D. Waste Construction Liquid Disposal: Provide portable containers for disposal of any waste construction liquids or fluids that are generated by or needed for the

construction work. Do not dump any waste construction liquid or fluid (including paint, solvents, plaster mud, brush and tool cleanup water, etc.) down the building sanitary or storm drain systems or anywhere on the site (except clean water). Dispose of contents of all portable containers off site daily.

- E. Dispose of all flammable, hazardous, and toxic waste materials daily. Storage of these materials will not be permitted on the interior of building.
- F. Locate dumpster within the fenced Work Area.
 - 1. Dumpsters shall have a hinged lid that shall be closed and locked at the end of each day's work.

1.05 TEMPORARY ELECTRICITY

- A. The Owner shall provide and pay for electrical power. The Contractor shall be responsible for any temporary power service or electrical generator(s) required to complete the work of this Contract. The Contractor will provide for all connection costs including but not limited to fees, meters, transformers, disconnects, cabling, etc. and shall remove temporary connections after Work is completed.
- B. Provide power outlets for construction operations, with branch wiring and distribution boxes. Provide OSHA/WISHA approved flexible power cords as needed.
- C. Permanent convenience receptacles may be utilized during construction provided they are replaced if damaged or defaced in any way.

1.06 TEMPORARY LIGHTING

- A. Provide and maintain lighting for construction operations. Provide sufficient lighting to ensure proper workmanship everywhere.
- B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtailed, and lamps as needed.
- C. Maintain lighting and provide routine repairs.

1.07 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain temporary OSHA/WISHA required portable toilet facilities and enclosures; in sufficient numbers and locations to accommodate the size of workers on site. Maintain daily in clean and sanitary condition.

1.08 TEMPORARY HEAT

- A. Provide and pay for temporary heat devices and energy source as required to maintain conditions required for construction operations.
 - 1. Use of the permanent heating system in the buildings is not permitted.
 - 2. Direct fired gas/oil heaters are not allowed, all combustion/exhaust gases shall be vented to building exterior.

- B. Maintain minimum ambient temperature of 60 degrees F in areas where construction is in progress, unless required otherwise by manufacturers, trade associations, and/or the specification sections.

1.09 TEMPORARY VENTILATION

- A. Provide temporary ventilation equipment to facilitate drying out of materials, to dissipate humidity, to maintain consistent temperature in all areas and to prevent accumulation of dust, fumes, vapors, or gases.

1.10 TEMPORARY DEHUMIDIFICATION

- A. Provide temporary dehumidification equipment as required to lower the moisture content of the building interior and dry out materials to required levels.

1.11 BUILDING MATERIALS ACCLIMATIZATION AND DRY OUT

- A. Prior to installation of any building insulation, wall surfaces or finishes, the Contractor shall provide the equipment and expertise required to dry out the building structure and materials, including concrete slabs, to conform with the following minimum criteria:
 - 1. Contractor is responsible for selecting the means and methods utilized to acclimate, ventilate and dry out the building structure and materials, including deciding the proper sequence of construction and other determinates affecting the dry out process; and shall hire an expert consultant to advise in this process if problems or questions are encountered.
 - 2. Acclimate, ventilate and dry out structure and materials as required by manufacturers of materials, finishes or coverings applied over, onto or within the structure or material.
 - a. Refer to Section 03 30 02 for requirements related to concrete floor slabs.
 - 3. Acclimate, ventilate and dry out structure and materials as required to allow installed materials to dry evenly and rapidly as recommended by manufacturer or reference standard.
 - 4. Acclimate, ventilate and dry out structure and materials as required to prevent the formation of water condensation on any material.
 - 5. Do not install thermal insulation until the moisture content and temperature of building materials is being maintained at a level that will prevent condensation from forming in the insulation or on the cold side surface of the insulated cavity.
 - 6. Test and record moisture content of each different building structural element and material on a daily basis during and after acclimatization and dry out process.
 - a. Provide professional quality moisture testing equipment capable of providing consistently accurate moisture content analysis for each different type of material found on project.
 - b. Record moisture content data collected on a printed log showing location of each test and material/structural member tested; key each test to a floor plan.

1.12 TEMPORARY BARRIERS

- A. Provide barriers to protect the public from any potentially unsafe conditions, and from damage and/or dust from construction operations.
- B. Provide protection for existing plant life designated to remain. Replace damaged plant life.
- C. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

1.13 TEMPORARY CONSTRUCTION SITE FENCE

- A. Secure building during construction. Secure any areas on site with 6-foot-high temporary construction fence that the Contractor will use for storage of materials and equipment. Theft or vandalism of Project related items is the responsibility of the Contractor.

1.14 TEMPORARY STORAGE

- A. The Contractor shall make whatever provisions necessary to ensure the safe and weathertight protection of materials, or equipment temporarily stored.

1.15 PROTECTION OF INSTALLED WORK

- A. Protect installed work. Provide special protection where specified in individual specification sections or as required to prevent any type of damage or defacement.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.
- C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer and install protection. Remove and replace waterproofing or roofing material damaged during the work.
- D. Prohibit construction worker access to all rooms and areas which do not have construction work. After work in any area or room is complete, prohibit further worker access.
- E. Prevent any construction dust and dirt from entering the HVAC equipment and ductwork, computer equipment, electrical switchgear, building systems/equipment, smoke detectors or anything that will be adversely affected.

1.16 SECURITY

- A. Lock up or block up all doors, windows and openings in the building and lock any gates on the site each day prior to leaving the site to prevent unauthorized entry into the building or site.

- B. Maintain building security until the Owner takes permanent occupancy or until substantial completion is achieved, whichever occurs first.

1.17 TEMPORARY SIGNAGE

- A. Project Identification and Temporary Signs: Provide Project identification and other signs as required by the Authorities Having Jurisdiction, or the Contract Documents. Install signs where indicated to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
 - 1. Provide temporary, directional signs for construction personnel and visitors.
 - 2. Maintain and touchup signs so they are legible at all times.

1.18 PROGRESS CLEANING

- A. During the work: Contractor and each subcontractor at all times shall keep premises free from accumulation of waste materials, construction debris and dirt caused by his operations on a daily basis.
- B. Maintain areas free of waste materials, debris, rubbish and dust. Maintain site in a clean and orderly condition.
- C. Remove waste materials, debris, and rubbish from site weekly and dispose off-site.

1.19 DUST CONTROL

- A. Provide positive methods and apply dust control materials to minimize raising dust from dispersing into the atmosphere.
- B. Provide positive methods for ventilation to prevent dust from dispersing and/or accumulating onto finished surfaces being installed.

1.20 ENVIRONMENTAL PROCEDURES

- A. Comply with all environmental and health safety regulations.
- B. Burning on site is not permitted.

1.21 EMERGENCY CONTACTS

- A. Provide Owner with two emergency contact names (Superintendent and Project Manager), with home phone, cell phone and pager numbers.

1.22 CONSTRUCTION PARKING

- A. Construction workers shall park only in designated areas. Coordinate with Owner for locations.

END OF SECTION

SECTION 01 55 26

TRAFFIC CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Temporary Traffic Control.

1.03 REFERENCES

- A. References shall be the edition current as of the date of the Contract Documents.
- B. Authority Having Jurisdiction (AHJ): City of Concrete and/or Skagit County.
- C. Washington Department of Transportation (WSDOT):
 - 1. WSDOT Specification: Standard Specification for Road, Bridge, and Municipal Construction. (Delete Measurement and Payment Provisions.)
 - 2. WSDOT Standard Plans for Road and Bridge and Municipal Construction: Standard plans.
 - 3. WSDOT Design Manual, M22-01.
 - 4. WSDOT Work Zone Traffic Control Guidelines, M55-44.
- D. U.S. Department of Transportation, Federal Highway Administration (FHWA):
 - 1. Manual on Uniform Traffic Control Devices (MUTCD)
 - 2. FHWA Final Rule on 23 CFR 630 Subpart J.
- E. United States Access Board; Public Right of Way Accessibility Guidelines (PROWAG).
- F. United States Access Board; ADA Accessibility Guideline (ADAAG).
- G. American Traffic Safety Services Association (ATSSA); ATSSA Quality Guidelines for Work Zone Traffic Control Devices.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Traffic Control Plan: In accordance with these documents, WSDOT Standard Specifications, or the authorities having jurisdictions (AHJ)'s Standard Specifications.
 - 1. The Traffic Control Plan shall provide description of devices and management to be used during working and non-working periods. Include durations (days and times) of control plans. Plans shall be submitted for approval a minimum of [30] days prior to the implementation of the plans to allow time for review and approval by the authorities having jurisdiction
- C. Provide Qualifications for Traffic Control Manager (TCM) and Traffic Control Supervisor (TCS).

1.05 QUALITY ASSURANCE

- A. Qualifications for the Traffic Control Manager: As specified in WSDOT Standard Specifications Section 1-10.2(1)A.
- B. Qualifications for the Traffic Control Supervisor: As specified in WSDOT Standard Specifications Section 1-10.2(1)B.
- C. The TCS and the TCM shall have valid certificates as "Traffic Control Supervisors" as issued by the Evergreen Safety Council, The Northwest Laborers-Employers Training Trust, The American Traffic Safety Services Association, or approved equal.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Traffic Control Devices:
 - 1. Provide or construct traffic control devices, including temporary concrete barriers and temporary construction fencing, in conformance with applicable jurisdiction specifications and requirements. Include descriptions of traffic control devices in the Traffic Control Plan. The condition of signs and traffic control devices shall be new or "acceptable" as defined in the ATSSA Quality Guidelines for Work Zone Traffic Control Devices, and will be accepted based on a visual inspection by the Traffic Control Supervisor.

PART 3 - EXECUTION

3.01 GENERAL CONSTRUCTION

- A. For temporary traffic control of streets, roadways, and pedestrian and bicycle facilities that are to be owned or maintained by the AHJ, perform work described in this section in conformance with the applicable requirements of that jurisdiction.
- B. Work with the responsible jurisdiction to coordinate necessary signal changes if required by the traffic control plan. Traffic signals shall only be countermanded by a uniformed police officer.
- C. Identify the use of flaggers and Police staff for traffic control in the Traffic Control Plan and obtain prior approval from the AHJ. Employ flaggers whenever trucks enter onto a city street, including at vehicle access gates to the construction work Site, to prevent conflicts with vehicles, cyclists and pedestrians. Minimize roadway, lane and sidewalk closures. Limit lane and roadway closures to non- peak traffic flow hours or other hours as determined by the AHJ. Travel lanes, parking lanes and sidewalks outside of the construction wall shall be reopened when no construction activities are occurring.
- D. When sidewalks or bike paths are closed temporarily, provide alternate detour paths complying with ADA accessibility. In the case of temporarily closed bike lanes or paths, provide signing next to the lane or path and ahead of the work alerting bicyclists to the change. Parking lanes may be used for this purpose if a transition between the existing top of curb and the roadway is accessible. Include proposed design, including pedestrian and bicycle detour and wayfinding signage, and business access signs and devices with the Traffic Control Plan. If the temporary walkway is to remain in place during non-working hours, clearly describe, in a separate section / chapter of the Traffic Control Plan, the traffic control devices to be in place during this period. Obtain applicable permits for parking lane use and sidewalk closures.
- E. Do not close sidewalks on opposite sides of the roadway at the same time.
- F. Coordinate street closures, lane closures and other in-street work activities, including haul routes, with Fire Departments and other emergency responders. For long-term street closures, notify post offices, major private delivery services, school districts, and solid waste collection operators.
- G. Obtain prior approval from local jurisdictions for closing or partial closing of streets, sidewalks or bike routes, as applicable. Give the required advance notice of full and partial street closures after approval of the traffic control plan to agencies providing emergency services, including without limitation, police, fire and ambulance services. Include, at the least, the dates and times of commencement and completion of work, names of streets or location of sidewalks and alleys to be closed or partially closed, and schedule of operations and routes of detours where applicable.

- H. Ensure that reliable emergency access is maintained to avoid delays in response times.
- I. When the Work involves use of public ways, follow standard construction safety measures, which include but are not limited to, installing advance warning signs and high visibility construction barriers, providing necessary flaggers as required by the local authorities, and installing and maintaining means of reasonable access to fire hydrants, parking garages and other property.
- J. Obtain approvals from jurisdictions if detours pass through multiple jurisdictions.
- K. Obtain permits required for short-term and long-term, on-street parking displacements.
- L. Final configuration of temporary fencing to be determined during Pre-Construction meeting as it is critical to establish safe and code required pathways for both contractors, staff and visitors to the building

3.02 TRAFFIC CONTROL MANAGEMENT

- A. Before beginning work on the project, designate individual(s) to perform the duties of TCM and TCS, as described in Article 1.04 herein.
- B. Identify an alternate TCM and TCS that can assume the duties of the assigned or primary TCM and TCS in case of that person's inability to perform. Alternates will be adequately trained and certified to the same degree as the primary TCM and TCS.
- C. Maintain 24-hour telephone numbers at which the TCM and TCS can be contacted and be available at the AHJ's request at other than normal working hours. Supply the TCM and TCS with appropriate personnel, equipment and materials to correct any deficiency in the traffic control system at any time.
- D. Patrol the traffic control area daily and reset disturbed signs and traffic control devices.
- E. Remove or cover signs and other traffic control devices during periods when they are not necessary.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Administrative and Procedural Requirements for Materials and Equipment related to:
 - 1. Transportation and Handling.
 - 2. Storage and Protection.
 - 3. Product Options.
 - 4. Substitutions.

1.03 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures and systems forming the work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the work. Products may also include existing materials or components required for reuse.
- B. Provide interchangeable components of the same manufacturer, for similar components.
- C. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

1.04 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement or damage.

D.

1.05 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated products, place on sloped supports, above ground.
- C. Provide and pay for off-site storage and protection when site does not permit on-site storage or protection.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

1.06 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by naming a Manufacturer "or approved equal", or with a provision for Substitution Request: Submit a request for substitution for any manufacturer not named.
- D. Products Specified by "or approved equal" to a Listed Manufacturer: Products with same function and similar quality and features to listed manufacturer.
- E. Products Specified by "Similar To" a Listed Manufacturer: Products with same function and similar quality and features to listed manufacturer.

1.07 SUBSTITUTIONS

- A. Architect will consider requests for Substitutions up to 10 calendar days prior to bid opening date.

- B. Substitutions may be considered after contract award only when a product becomes unavailable through no fault of the Contractor, or when the Owner deems it to be in the Owner's best interest to do so.
 - 1. Substitutions proposed to allow timely delivery due to Contractor's failure to order material / equipment on time will not be considered.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- D. A request constitutes a representation that the Bidder / Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the Substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with re- approval by authorities.
 - 6. Has investigated and determined that the proposed substitution will meet code requirements.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, if they have not been previously approved.
- F. Substitution Submittal Procedure:
 - 1. All substitution requests shall be accompanied with the Substitution Request Form completely filled out. Substitution Request Forms are bound in the Project Manual in Section 01 60 01. Limit each request form to one proposed substitution.
 - 2. Submit one complete set of substitution request forms and supporting data via mail or e-mail.
 - 3. Clearly indicate with red arrows on the supporting data the proposed substitution and accessories.
- G. Substitution Review Procedure: Because of the number of substitution requests typically received before bidding and the coordination required to review these, the following procedures will apply:

1. Substitution requests received after the time specified in paragraph 1.07 A. will not be reviewed or listed in addenda.
2. Substitution requests will be evaluated and the request form will be annotated in the column marked "For Use by Architect." It will then be retained in the A / E's file.
3. The Substitution Request Form and submitted data will not be returned to the submitter. These forms are for the A / E's in-house use only.
4. Only approved substitutions will be listed on addenda. All proposed substitutions not listed on addenda shall be considered by the submitter and the Contractor as a non-acceptable substitution and shall not be used.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 60 01

SUBSTITUTION REQUEST FORM

SUBMITTED TO:

Carletti Architects, P.S./Skagit County

PROJECT:

Skagit County Concrete Community Center TI

SPECIFIED ITEM:

Section No.	Paragraph No.	Description of Specified Item
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The Undersigned requests consideration for the following substitution to that specified:
PROPOSED SUBSTITUTION:

ATTACHED DATA:

Include product description, specifications, drawings, photographs, performance, and test data as necessary for evaluation. Clearly identify proposed substitution and portions of data from other items where more than one item is described. Include description of changes to Contract Documents required by proposed substitution.

CERTIFICATION:

The Undersigned certifies that the following paragraphs are correct:

1. Proposed substitution does not affect dimensions shown on Drawings.
2. The Undersigned will pay for changes to building design, including engineering design, detailing, and construction costs, caused by requested substitution.
3. Proposed substitution will have no adverse effect on other trades, Construction Schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for proposed substitution.

Undersigned further states that function, appearance, and quality of proposed substitution are equivalent or superior to specified item.

SUBMITTED BY:

Signature _____
Firm _____
Address _____
Date _____
Telephone () _____
FAX () _____

FOR USE BY ARCHITECT:

Approved Approved as Noted
 Not Approved Received too Late
By _____
Date _____
Remarks _____

END OF SECTION

SECTION 01 70 00

EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. General Procedural Requirements Governing Execution of the Work including, but not limited to, the following:
 - 1. General Installation of Products.
 - 2. Progress Cleaning.
 - 3. Starting and Adjusting.
 - 4. Protection of Installed Construction.
 - 5. Correction of the Work.

PART 2 - PRODUCTS – NOT USED

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Existing Conditions / Utilities: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of existing utilities and other construction affecting the Work.
- B. Acceptance of Conditions: Start of work / installation indicates acceptance of existing conditions as not conflicting with the requirements of the Contract Documents or the design intent and being acceptable without any modification.

3.02 PREPARATION

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

3.03 CONSTRUCTION LAYOUT

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

3.04 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to

damaging operations or loading in excess of that expected during normal conditions of occupancy.

- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.05 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- D. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- E. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- F. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the

construction period.

3.06 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each installed utility and piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Arrange for a factory-authorized service representative to inspect and repair any piece of equipment that does not function properly or cannot be made to operate as specified.

3.07 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

3.08 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- C. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

END OF SECTION

SECTION 01 73 43

BUILDING DRY OUT AND ENVIRONMENTAL CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Building Dry Out During Construction.
- B. Control of Building Environmental Conditions During Construction.

1.03 SCOPE OF WORK

- A. Building dry out and environmental control shall be a proactive, well-planned, monitored and documented process to achieve the following:
 - 1. To dry out building materials to levels required for constructing / installing the Work in accordance with manufacturer's requirements and industry standards.
 - 2. To maintain environmental conditions (temperature, relative humidity, moisture content and air circulation) within the building as required for constructing / installing the Work in accordance with manufacturer's requirements and industry standards.
 - 3. Prevent conditions within the building that allow the growth of fungi / mold during construction.
 - 4. Avoid rejection or rework of any part of the Work due to improper building dry out or moisture control.
- B. Provide the means and methods required to dry out the building materials as early as possible in the construction schedule.
- C. Control and maintain the following conditions inside the building spaces as required to provide for optimum drying conditions for building materials:

1. Temperature of air and building materials.
 2. Relative humidity of the air.
 3. Circulation and movement of the air.
 4. Rate of exhaust air and outside air exchange.
 5. Control the relative humidity level of the building interior air as required to:
 - a. Allow building materials to rapidly dry appropriately and prevent growth of mold and mildew.
- D. Plan and manage the building dry out to prevent the following unacceptable conditions:
1. No moisture or relative humidity conditions inside the building that allow the growth of fungi / mold spores.
 2. Delays in the Work or repair / replacement of installed work resulting from non-conforming environmental conditions within the building or from non- conforming moisture content in building materials.

PART 2 - PRODUCTS

2.01 EQUIPMENT

- A. Monitoring and Testing: Provide minimum monitoring and testing equipment, for monitoring temperature, relative humidity and moisture content:
- B. Temporary Heating Equipment:
1. Provide, maintain and pay for temporary portable heating equipment and energy source as required to maintain environmental conditions within the building required for construction operations.
 2. Provide heating equipment capable of maintaining minimum ambient temperature inside the building of 70 degrees F, or higher when required to dry out building materials in accordance with the project schedule.

- a. Heating equipment is limited to electric heaters or indirect-fired gas, oil or kerosene fired units with exhaust piped to building exterior. Direct fired gas / oil heaters are not allowed, all combustion / exhaust gases shall be vented to building exterior.
 - b. Provide flexible ducting for distributing heated air to all parts of the building.
3. Use of the permanent heating system in the building for temporary heat is subject to the Owner's prior approval based on compliance with the following:
 - a. Interior dust producing work shall be complete and building interior shall be clean and dirt / dust-free.
 - b. Approved filtration system is installed on return air.
 - c. Heating system warranty shall begin as noted in the General Conditions in Section 00 72 13, (not on the date permanent heating equipment is started for providing temporary heat).
 - d. Contractor shall clean any permanent heating equipment and ductwork that becomes contaminated with construction dirt / dust. Cleaning shall be performed by a company that is acceptable to the Owner specializing in duct and heating equipment cleaning.
- C. Temporary Ventilation Equipment:
 1. Provide and pay for temporary portable ventilation equipment to provide air circulation and movement as required to promote increased evaporative drying of building materials, for maintaining uniform temperature and relative humidity levels throughout all areas the building and to evacuate and prevent concentration of dust, fumes, vapors, or gases.
- D. Temporary Dehumidification Equipment:
 1. Provide and pay for temporary portable dehumidification equipment as required to lower the relative humidity level inside the building as required to promote increased evaporative drying of building materials, to maintain relative humidity level of building

interior air under 60% and to reduce time to dry out materials when required to prevent delays in construction schedule.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate the building dry out schedule with the work of other sections to provide the building interior environmental requirements (temperature, relative humidity and ventilation) as required for accomplishing the Work as specified in each specification section and as required by each material / product / system manufacturer's requirements.

3.02 ENVIRONMENTAL CONDITIONS DURING CONSTRUCTION

- A. Provide temporary heat, ventilation and dehumidification as required to provide the following:
 - 1. Interior air temperature and relative humidity levels required for completing the Work of this project in conformance with the environmental requirements contained in the specification sections and as required by the materials / products / systems manufacturers.
 - 2. Building materials dried to the specified moisture content and as recommended by materials / products / systems manufacturers.

END OF SECTION

SECTION 01 78 00

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Administrative and Procedural Requirements for the Contract Closeout including:
 - 1. Closeout Procedures and Documents.
 - 2. Final Cleaning.
 - 3. Adjusting.
 - 4. Extra Stock.
 - 5. Spare Parts and Maintenance Materials.
 - 6. AHJ Approved Permit Drawing Set.
 - 7. As-Built Documents.
 - 8. Operation and Maintenance Data and Bonds and Warranties.
 - 9. Punch List.
 - 10. Final Adjustment of Accounts.

1.03 CLOSEOUT PROCEDURES AND DOCUMENTS

- A. Comply with the General Conditions of the Contract.
- B. Submit draft As-Built Documents and draft Operations and Maintenance Data and Warranty documents prior to Substantial Completion.
- C. Submit final closeout documents as required for Project closeout.

1.04 FINAL CLEANING

- A. Execute final cleaning prior to Substantial Completion review and during the period between Substantial and Final Completion where punch list work causes waste, rubbish or debris.

- B. Clean surfaces exposed to view, remove temporary labels, stains and foreign substances. Follow manufacturer's recommendations for cleaning installed products.
- C. Clean equipment and fixtures to sanitary condition.
- D. Clean dirt and debris from drainage systems.
- E. Clean site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.05 ADJUSTING

- A. Adjust operating products and equipment in accordance with manufacturer's recommendations and specification section to ensure smooth and unhindered operation.

1.06 EXTRA STOCK

- A. Provide extra stock in quantities specified in individual specification sections.
- B. Make arrangements with the Owner's representative to deliver extra stock items, prior to final payment.
- C. Document receipt of extra stock by Owner's representative by listing each extra stock item and obtaining the signature of the Owner's representative for it. Include this document in Part 1 of the O and M Manual.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.
- B. Make arrangements with the Owner's representative to deliver products, spare parts, maintenance and extra materials, prior to final payment.
- C. Document receipt of products, spare parts, maintenance and extra materials by Owner's representative by listing each product, spare part, maintenance and extra material item and obtaining the signature of the Owner's representative for it. Include this document in Part 1 of the O and M Manual.

1.08 AHJ APPROVED PERMIT DRAWING SET

- A. During construction, maintain Permit Set of drawings in good, clean condition and protect from damage or marks.
- B. After obtaining the Certificate of Occupancy, make arrangements with the Owner's representative to deliver AHJ approved Permit Set of drawings to the

Owner for their permanent record, prior to final payment.

- C. Document receipt of Permit Set of drawings by Owner's representative by obtaining the signature of the Owner's representative for it. Include this document in Part 1 of the O and M Manual.

1.09 AS-BUILT DOCUMENTS

- A. As-Built Documents shall consist of the following:
 - 1. Contract Documents:
 - a. Contract Drawings with As-Built Revisions noted.
 - b. Reviewed Shop Drawings, Product Data and Samples.
 - 2. Drawings of Contractor designed systems, (i.e. joists, trusses, fire sprinkler system, fire alarm system, controls system, etc.).
- B. During Construction:
 - 1. Maintain on-site throughout the construction period, one set of As-Built Documents and record actual revisions to the work on these documents. As-Built Documents and records specified below may be kept in electronic format with on-site access and with off-site weekly backup.
 - a. Store As-Built Documents separate from documents used for construction.
 - b. Record information concurrent with construction progress.
 - c. Contract Drawings: Legibly mark, cloud and flag each item to record actual construction including:
 - 1) Surveyed as-built conditions.
 - 2) Measured horizontal and vertical locations of underground utilities referenced to permanent surface improvements.
 - 3) Measured location of internal utilities concealed in construction, referenced to visible and accessible features of the work.
 - 4) Field changes of dimensions and detail.
 - 5) Details not on original Contract Drawings.
- C. Prior to Contract Closeout: Prepare and submit As-Built Documents to the Architect as follows:

1. As-Built Document Content:
 - a. As-Built Utility Survey: Provide survey of site utility piping and structures with location and elevation, performed by a professional surveyor. Survey information shall be recorded on the Contract Drawings for inclusion in the As-Built Drawings.
 - b. As-Built Project Drawings: Drawings shall be in good, clean condition and legibly marked in red ink (red text) to show revisions and changes made during construction and as-built conditions. Mark or stamp bottom of each sheet "As-Built Drawings, Name of Construction Company, Date".
 - c. Contractor Designed Systems: Electronically update the contractor designed system drawings with as-built conditions. Mark or stamp bottom of each sheet "As-Built Drawings, Name of Construction Company, Date".
2. Draft Submittal:
 - a. Submittals shall be submitted in the following packages:
 - 1) Civil.
 - 2) Landscape.
 - 3) Architectural.
 - 4) Structural.
 - 5) Plumbing.
 - 6) HVAC.
 - 7) Electrical.
 - b. Digital Copy: Submit a digital draft copy in with the content described below in PDF format for review by Architect / Engineer and Owner. The digital copy will be returned to Contractor with Architect / Engineer and Owner comments. Revise content of documents as required by Architect / Engineer and Owner comments prior to submitting final documents. Organize the submittal as follows:
 - 1) As-Built Survey: Provide one PDF file and label the file "As- Built Utility Survey".
 - 2) As-Built Project Drawings: Provide a separate PDF file for each discipline and label the file "As-Built_*Discipline*". Each file shall have each page bookmarked and labeled to match the sheet numbers.

- 3) Contractor Designed Systems: Provide one PDF file for each set of system Drawings and label each file per its content.
3. Final Submittal:
- a. Printed Copy (Hard Copy): Submit two (2) sets of revised documents. Organize the submittal as follows:
 - 1) As-Built Survey: Provide printed copy on 20 lbs. white paper.
 - 2) As-Built Project Drawings: Provide printed copy on 20 lbs. white paper in color so red ink (red text) is in color.
 - 3) Contractor Designed Systems: Provide printed copy of each set on 20 lbs. white paper.
 - b. Digital Copy: Submit a digital copy of the revised documents in PDF format. Digital copy shall be in color so red ink (red text) is in color and matches the format of the draft submittal.

1.10 OPERATION AND MAINTENANCE DATA AND BONDS AND WARRANTIES

- A. Operation and Maintenance Data: Refer to Section 01 78 33.
- B. Bonds and Warranties: Refer to Section 01 78 33.

1.11 PUNCH LIST

- A. Contractor Punch List: Upon completion of the Work, the Contractor shall walk-through each room / area in the building and around the entire exterior and site and prepare a punch list of each item of work that is not completed or does not conform to the requirements of the Contract Documents.
- B. Architect's Punch List: After completion of the punch list by the Contractor, provide written notice that the Work has been substantially completed and schedule a room by room punch list walk-through with the Architect and Owner to review the finished work and Contractor's punch list items.
 1. On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements.
 2. Any additional items of uncompleted or unacceptable work that are found during this walk-through shall be added onto the Punch List for completion / correction.
 3. 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.

- C. The project budget provides for two final visits to the project site by the Architect / Engineer for performing a punch list review of the work. The first visit will be in response to the Contractor's notice of substantial completion of the Work and if necessary, the second will be after notification by the Contractor that punch list items and deficiencies noted during punch list review have been corrected.
- D. Should additional reviews by the Architect / Engineer be required due to the Contractor's failure to correct deficient work, the Owner will deduct the amount of Architect / Engineer compensation for re-review services from final payment to Contractor.

1.12 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to Architect.
- B. Reflect all adjustments to Contract Sum. Indicate following:
 - 1. The Original Contract Sum;
 - 2. Additions and deductions resulting from:
 - a. Previous change orders;
 - b. Alternates;
 - c. Unit price adjustments;
 - d. Deductions for uncorrected work;
 - e. Deductions for liquidated damages;
 - f. Deductions for additional review services;
 - g. Other adjustments;
 - 3. Total Contract Sum, as adjusted;
 - 4. Previous Payments; and
 - 5. Sums remaining due.
- C. Prior to processing of Final Application and Certificate for Payment, all Closeout Documents including Project Record Documents, Operations and Maintenance Manuals and Warranty Binders must be submitted, reviewed and accepted by the Architect.

PART 2 - PRODUCTS

2.01 BINDERS

- A. Binders: Binders shall be black and have heavy-duty durable vinyl covers on front, back and spine, and have heavy duty metal D-rings.
- B. Dividers: Similar to Avery *Print-On Dividers, 8 Tab*.

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Operation and Maintenance Data.

1.03 SCOPE OF WORK

- A. To aid the continued instruction of operating and maintenance personnel, and to provide a positive source of information regarding the products incorporated into the Work, furnish and deliver the data described in this Section and in pertinent other Sections.
- B. Related Work:
 - 1. Required contents of submittals also may be amplified in pertinent other Sections.

1.04 SUBMITTALS

- A. Comply with applicable provisions of Section 01 33 00.
- B. Submit one electronic (PDF) copy of a preliminary draft of the proposed Manual or Manuals to the Architect for review and comments.
- C. Unless otherwise directed in other Sections, or in writing by the Architect, submit two printed copies of the final Manuals and one electronic (PDF) copy to the Architect prior to instruction of operation and maintenance personnel.

1.05 QUALITY ASSURANCE

- A. In preparing data required by this Section, use only personnel who are thoroughly trained and experienced in operation and maintenance of the described items, completely familiar with the requirements of this Section, and skilled in technical writing to the extent needed for communicating the essential data.

PART 2 - PRODUCTS

2.01 INSTRUCTIONS

- A. Where instruction Manuals are required to be submitted under other Sections of these Specifications, prepare in accordance with the provisions of this Section.
- B. Format:
 - 1. Size: 8-1/2-inch x 11-inch.
 - 2. Paper: White bond, at least 20 lb wt.
 - 3. Text: Neatly written or printed.
 - 4. Drawings: 11-inch height (11x17) preferable; bind in with text; foldout acceptable; larger drawings acceptable but fold to fit within the Manual and provide a drawing pocket inside rear cover or bind in with text.
 - 5. Flysheets: Separate each portion of the Manual, by Specification Section, with neatly prepared flysheets briefly describing contents of the ensuing portion; flysheets may be in color.
 - 6. Binders: Commercial quality heavy-duty plastic or fiberboard 3-ring D-ring binders. All binding is subject to the Architect's approval.
 - 7. Measurements: Provide all measurements in U. S. standard units such as feet-and-inches, lbs, and cfm.
 - 8. Manuals shall be clearly identified on the cover with at least the following information:

2.02 OPERATING AND MAINTENANCE INSTRUCTIONS

()
(name and address of work)

()
(name of contractor)

()
(general subject of this Manual)

()
(space for approval signature of)

()

(the Architect and approval date)

- A. Contents: Include at least the following:
1. Neatly typewritten index near the front of the Manual, giving immediate information as to location within the Manual of all emergency information regarding the installation.
 2. Complete instructions regarding operation and maintenance of all equipment involved including lubrication, disassembly, and re-assembly.
 3. Complete nomenclature of all parts of all equipment.
 4. Complete nomenclature and part number of all replaceable parts, name and address of nearest vendor and all other data pertinent to procurement procedures.
 5. Copy of all guarantees and warranties issued.
 6. Manufacturers' bulletins, cuts, and descriptive data, where pertinent, clearly indicating the precise items included in this installation and deleting, or otherwise clearly indicating, all manufacturers' data with which this installation is not concerned.
 7. Such other data as required in pertinent Sections of these Specifications.

PART 3 - EXECUTION

3.01 INSTRUCTION MANUALS

- A. Preliminary:
1. Prepare a preliminary draft of each proposed Manual.
 2. Show general arrangement, nature of contents in each portion, probable number of drawings and their size, and proposed method of binding and covering.
 3. Secure the Architect's approval prior to proceeding.
- B. Final: Complete the Manuals in strict accordance with the approved preliminary drafts and the Architect's review comments.
- C. Revisions:
1. Following the indoctrination and instruction of operation and maintenance personnel, review all proposed revisions of the Manual with the Architect.

2. If the Contractor is required by the Architect to revise previously approved Manuals, compensation will be made as provided for under "Changes" in the General Conditions.

END OF SECTION

SECTION 01 78 33

BONDS AND WARRANTIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Bonds and Warranties.

1.03 SCOPE OF WORK

- A. Compile specified certificates, bonds and similar certification.
- B. Compile specified services and maintenance contracts.
- C. Co-execute submittals when so specified.
- D. Review submittals to verify compliance with Contract Documents.
 - 1. Submit to Architect on Contractor's letterhead. Architect reviews and transmits to Owner.
- E. Related Requirements:
 - 1. Coordinate related requirements specified in other parts of the Project Manual, including but not limited to following.
 - a. Operating and Maintenance Data with Section 01 78 23.
 - b. Each respective Section as required.

1.04 SUBMITTALS

- A. Assemble executed certificates, warranties, bonds, and any required service and maintenance contracts from the respective manufacturers, suppliers and subcontractors.
- B. Number of original signed copies required: One printed copy of each and one electronic copy (PDF) of each.
- C. Contents: Neatly type Table of Contents in orderly sequence. Furnish complete information for each item as follows:

1. Product or work item;
2. Firm, with name of principal, address, and telephone number;
3. Scope;
4. Date of beginning of warranty or service and maintenance contract;
5. Duration of warranty or service maintenance contract;
6. Information for Owner's personnel, including:
 - a. Proper procedure in case of failure;
7. Instances which might affect validity of warranty or bond.
8. Contractor, name of responsible principal, address, and telephone number.

1.05 FORM OF SUBMITTALS

- A. Prepare in duplicate, packets conforming to following requirements.
 1. Size: 8-1/2-inch X 11-inch punched sheets for 3-ring binder. Fold larger sheets to fit into binders.
 2. Binders: Commercial quality heavy-duty plastic or fiberboard 3-ring D-ring binders. All binding is subject to the Architect's approval.
 3. Covers: Identify each packet with typed or printed title "WARRANTIES AND BONDS" and showing:
 - a. Title of Project.
 - b. Name of Contractor.
- B. Format / Warranties / Guarantees:
 1. In addition to guarantees required by "General Conditions of Contract", furnish written guarantees warranting certain portions of work for longer periods.
 2. Address them to Owner.
 3. Submit through Architect on Contractor's letterhead before final payment and acceptance of work by Owner.
 4. Where more than one subcontractor is involved, submit guarantee for each.

C. Form of Guarantee for other specified installation:

1. I (We), (insert name of contractor), certify (insert name of trade or portion of work being guaranteed) installed by (insert name of appropriate subcontractor) on (insert name of job) located at (insert building/site name and address) is performed in strict accordance with Contract Documents. Further, I (We) guarantee this work to be (watertight, and without leaks) (other) caused by defects in materials and workmanship, for (fill in specific required guarantee period) years from (date of acceptance of work), and will repair, or replace, without delay, any defects in materials and workmanship discovered within guarantee period.

Sincerely,

(Name of Contractor / responsible principal / address/telephone number). Signed by Owner, Partner, or other person authorized to commit firm.)

1.06 TIME OF SUBMITTALS

- A. For equipment or component parts of equipment put into service during progress of construction:
 1. Submit documents within ten days after final inspection and acceptance; or:
 - a. Otherwise make submittals within ten days after Date of Substantial Completion, prior to final request for payment.
- B. For items of work, where acceptance is delayed materially beyond the date of Substantial Completion, provide updated submittal within ten days after acceptance. List the date of acceptance as the start of the warranty period.

1.07 WARRANTY LENGTHS AND START DATES

- A. All materials, parts, and labor shall be warranted for a minimum period of (1) one year; unless greater lengths for specific sections are specified elsewhere within the Project Manual.
- B. Warranty periods shall begin on the date established as Substantial Completion.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 79 00
DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Demonstration and Training.

1.03 SUMMARY

- A. Work requiring instruction of Owner's personnel is specified in individual Sections.
- B. Related Sections:
 - 1. Operation and Maintenance Data: Section 01 78 23.

1.04 COMMISSIONING

- A. Schedule instructional meeting or meetings within 2 weeks after Operation and Maintenance manuals have been accepted by the Architect.
- B. Prior to final inspection, fully qualified manufacturers' representatives shall fully instruct Owner's designated operating and maintenance personnel in operation, adjustment, and maintenance of equipment and systems.
- C. Basis of Instruction: Operation and maintenance manuals. Review contents of manuals with Owner's designated personnel, in full detail, to explain all aspects of operation and maintenance.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 02 22 00

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 REFERENCES

- A. American National Standards Institute (ANSI).
 - 1. A10.6 "American National Standard Safety Requirements for Demolition."

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable rules, codes, regulations, and safety orders of all public agencies having jurisdiction.

1.3 SITE CONDITIONS

- A. The building will not be occupied during demolition and construction. None the less, the Contractor will take all precautions to ensure the site is safe and clean.
- B. Provide dirt and dust barriers, debris containers, removal routes, and disposal to protect areas utilized by Owner.
- C. Where existing unidentified utilities, structures or services are discovered submit information for resolution prior to proceeding.
- D. See Site Plan for contractor parking, project access, staging areas and other safety and access requirements.

1.4 RELATED SECTIONS

- A. Section 00 31 00 - Information Available to Bidders; Asbestos Containing Material and Lead Based Paint Survey, dated November 21st, 2024, prepared by ALL4 LLC, 16 pages total.

1.5 WORK INCLUDED

- A. Removal and disposal of existing walls, doors, ceilings, drywall, flooring, plumbing, HVAC, electrical, light fixtures, kitchen hood and other items as noted on the Drawings.
- B. Removal of existing hazardous materials as noted within Section 00 30 00 - Information Available to Bidders.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Carefully remove items marked or designated for salvage or reuse and store as directed by Owner.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas affected by Work of this Section and verify that necessary shoring and other required protection is in place.

3.2 PREPARATION

- A. Provide protection as necessary and in accordance with applicable regulations.
- B. Verify existing utility services to remain in operation, cooperate with Owner in scheduling Work so there will be a minimum of interference. Prearrange utility shutdown or temporary interruption with Owners Project Manager prior to Work commencement.
- C. Notify utilities having service connections within the building in a timely manner.
- D. Contact municipal and regulatory agencies affected by and interested in the Work. Secure necessary information and permits required, and make detailed arrangements for smooth safe prosecution of the Work.

3.3 DEMOLITION

- A. Perform Work in accordance with ANSI A10.6, and regulatory requirements.
- B. Contractor shall be solely responsible for safety, adequacy and satisfactory performance of methods and means employed.
- C. Sequence of removal of demolished items so as to minimize impact on adjacent materials and utilities.
- D. Legally dispose of demolition materials off site. Location of disposal site and length of haul are the Contractor's responsibility.
- E. Carefully remove items to be retained by Owner for reuse and place in an area that is secure and safe from damage.
- F. Remove and dispose of all items marked for demolition as shown on Drawings.
- G. At beginning of construction, take appropriate measures to minimize construction dust and dirt from entering the existing HVAC system. At conclusion of construction, contractor shall replace all existing and new HVAC equipment filters with new filters.

3.4 CUTTING AND PATCHING

- A. General: Provide requirements and be responsible for all cutting, fitting, and patching required to complete the Work, or to: Make it so several parts fit together and provide for installation of ill-timed Work.
 - 1. Uncover portions of Work to provide for installation of ill-timed Work.
 - 2. Remove and replace defective Work.
 - 3. Remove and replace Work not conforming to Contract Document requirements.
 - 4. Remove samples of installed Work as specified for testing. Provide routine penetrations on non-structural surfaces for installation of piping.

- B. Project Conditions:
 - 1. Inspect existing conditions including elements subject to damage or movement during cutting and patching.
 - 2. After uncovering Work, inspect conditions affecting installation of products or performance of Work.
 - 3. Report unsatisfactory or questionable conditions to Owner in writing. Do not proceed with Work until Owner provides further instructions.

- C. Materials:
 - 1. Those required for original installation.
 - 2. For any change in materials, submit request for substitution to Owner.

- D. Preparation:
 - 1. Provide adequate temporary support as required to assure structural value or integrity of the affected portion of the Work.
 - 2. Provide devices and methods to protect other portions of the Project which may be exposed by uncovering Work.

- E. Performance:
 - 1. Execute cutting and demolition by methods which will avoid damage to other areas, and will provide proper surfaces to receive patching and finishing.
 - 2. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.
 - 3. Restore Work which has been cut or removed; install new products to provide completed Work in accordance with Contract Document requirements.
 - 4. Refinish entire surfaces as required to provide even finish to match adjacent finishes.
 - 5. Cutting: At limits of demolition Work required or specified, provide neat, orderly, and clean joints, lines, and edges of surfaces, whether for junctions with new materials or surfaces or whether to be left as existing.
 - 6. Patching: Repair or replace any surfaces selectively removed to access the Work and any surfaces to remain which become exposed, defaced, or damaged as a result of demolition Work at no increase in Contract Sum. Repair surfaces to existing level of finish to nearest change in plane.

7. Provide cutting of gypsum board as required for access and performance of Work. Review areas to be cut, for each type of unit, at pre-construction conference.
 8. Avoid cutting into walls that are finished with wall covering unless absolutely necessary for completion of Work.
 9. Patch and otherwise prepare gypsum board surfaces for painting where existing wall coverings are removed. Provide surfaces true, even, free of humps and depressions.
 10. Saw cut or core drill concrete at foundations or inside building envelope as required.
- F. At limits of demolition Work shown or specified, provide neat, orderly and clean joints, lines, and edges of surfaces, whether for junctions with new materials or surfaces or whether to be left as existing. Where methods or controls may not permit intended joining, submit conditions and alternatives, and obtain resolution prior to commencing Work.

3.5 PATCHING

- A. Repair or replace any surfaces to remain which become exposed, defaced, or damaged as a result of demolition work at no increase in Contract Sum. Repair and repaint surfaces to nearest change in plane.

3.6 CLEANING

- A. Provide cleaning during demolition as necessary and to the acceptance of the Owner.
- B. Leave all portions of demolition area in a level, safe, and sanitary condition acceptable to public authorities and the Owner.

3.7 SCHEDULE

- A. Items to be removed from the Site by Contractor: As shown.
- B. Items to remain in place and protected for reuse: As shown.

END OF SECTION

SECTION 02 22 10
Hazardous Materials Abatement

Part 1 – General

1.01 DESCRIPTION

- A. Work Included – Provide asbestos removal and disposal work as specified in this document and indicated on drawings in a safe and proper manner.
- B. Scope – Identified asbestos containing materials in all areas, including common areas, bathrooms, mechanical rooms, and attic spaces, within this building as stated in this specification and as shown on contract drawings. Asbestos containing materials to be removed are identified as follows;
 - 1. Asbestos Containing Material and Lead Based Paint Survey, dated November 21st, 2024, prepared by ALL4 LLC, 16 pages total.

Note: Quantities shown are estimates only (see section 1.02, A, this specification)

The work includes total, complete, and safe removal and disposal of all identified asbestos containing materials listed in the above noted reports and contained in Section 03 30 00 Information Available to Bidders.

- C. All work shall be accomplished in strict adherence to all requirements of the Contract Documents and in absolute adherence to the most current regulations governing this work including but not limited to: DOE, EPA, OSHA, WISHA, NIOSH, and NWAPA. General requirements for work may include but are not limited to: construction of regulated work areas, pre-cleaning of regulated work areas, continuously operating HEPA filtered negative pressure ventilation systems, use of Type “C” supplied air respirator systems, wet method asbestos removal procedures, lock-down penetrating encapsulant on substrates from which asbestos containing materials have been removed, and proper removal, handling, packaging, and disposal of asbestos.
- D. Prevailing wage rates shall be paid as indicated and in complete compliance with the relevant section of this Specification.
- E. Due to the location of the building, and the heavy use of adjacent streets and parking lots, entrances and exits from the work areas will be controlled during this project, as will parking and staging.
- F. Owner’s consultant to have complete access for quality control inspections at any time during the abatement work.

1.02 PRE-BID INSPECTION

- A. Scope of Work – As indicated on the drawings and as defined in this specification. It shall be the contractor’s responsibility to make his/her own determination as to the exact

quantities of materials to be removed and the labor, materials, and equipment/tools required to perform the work.

- B. Requests for clarification and/or questions regarding any contradictions, discrepancies, or Project job requirements which the Contractor believes do not conform to law or cannot be properly accomplished as shown, indicated, or intended, shall be reported to the Owner in writing 5 days prior to bid opening. If no such clarification or discrepancies are so reported, it is assumed that none exist and the Contractor shall be responsible for providing complete, proper, and legal removal and disposal of asbestos materials and PCB containing light ballasts as required and in conformance with the Contract Documents.

1.03 SUBMITTALS

- A. Pre-Job - The selected Contractor shall provide the following materials to the Owners representative at least five (5) work days prior to any site work including initial staging and set-up. No work will occur until the complete pre-job submittal package has been reviewed and approved by the Owner's representative.
 - 1) Copy of Washington State Contractor's License,
 - 2) Copy of Asbestos Abatement License,
 - 3) Copy of Insurance Coverage (with City of Kirkland, it's elected officials, officers, and employees as named additional insured), Asbestos specific liability coverage will be provided in the amount of one million dollars (\$1,000,000.00) minimum in Occurrence form or Claims Made if a three year rider ("tail") assurance is provided by the carrier.
 - 4) Copies of Labor and Industries Notice of Intent to Remove Asbestos and Northwest Air Pollution Authority Notice of Intent to Remove Asbestos filed by Contractor
 - 5) Site specific, detailed description and schedule of work plan elements, including starting and completion dates proposed shift hours (must meet all federal, state and local agency requirements for work of this nature).
- B. Post-Job – Following completion of the project, the Contractor will provide the following to the Owners representative (final payment will not be processed until the post-job submittals have been approved by Owner's representative).
 - 1) Copies of all air monitoring data
 - 2) Copies of all daily logs and sign in/out logs
 - 3) Documentation of all Change Orders
 - 4) Copies of all disposal manifests

1.04 INSPECTION AND TESTING

- A. Quality Assurance/Inspections –
 - 1) Owner's Representative shall have access to the work at all times and in all locations where work is in progress.
 - 2) Inspections by public officials from EPA, WISHA, NWAPA, Local Health Department, and DOE may be made at any time during the course of this Project.

- 3) Contractor shall designate a Certified Asbestos Supervisor who is completely knowledgeable in all areas of asbestos abatement work and this Project in particular. The Certified Asbestos Supervisor shall start and continue daily inspections of the entire work site from the time the abatement contractor mobilizes on site.
- 4) Contractor shall perform air sampling as required to meet OSHA, WISHA, and EPA requirements.

1.05 QUALITY ASSURANCE

- A. The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor shall hold the Owner harmless for failure to comply with any applicable work, hauling, disposal, safety, health, or other regulation on the part of himself, his employees, or his subcontractors.
- B. Where the provisions of this specification differ from any government agency requirements, the most stringent requirements will apply. Applicable regulations include but may not be limited to the latest revisions of:
 - 1) EPA 40 CFR part 763, Asbestos-Containing Material in Schools
 - 2) EPA 40 CFR part 61, National Emissions Standards for Hazardous Air Pollutants
 - 3) WAC 296-62-077 through 296-62-07751, WAC 296-65-001 through 296-65-050, and WAC 296-155
 - 4) All current regulations of Washington State Department of Ecology
 - 5) All current regulations of Washington State Department of Transportation
 - 6) Northwest Air Pollution Authority (NWAPA) Section 570, Removal and Encapsulation of Asbestos-Containing Material
 - 7) All regulations of the landfill where hazardous materials are deposited

Part 2 – Products

2.01 ITEMS SUPPLIED BY THE CONTRACTOR

- A. PPE (Personal Protective Equipment)- Contractor to provide sufficient respirators, respirator cartridges, disposable clothing, goggles, and other protective gear to adequately outfit all workers every day for each shift, and to outfit all authorized visitors who are expected at the site during each shift.
- B. Other Equipment – The Contractor Shall Supply:
 - 1) Sufficient scrapers, brushes, staple guns, shovels and other hand tools needed to complete the Project in the proper manner.
 - 2) Enough ladders and scaffolds to support the number of workers scheduled on the Project.
 - 3) Temporary electrical devise, cable, etc., as needed to effect a 'lock-out/tag-out' of all electrical power in the work areas, with electrical power supplied through proper GCFI units from other areas of the building.

- 4) Water hose and enough spray equipment to apply adequate amounts of amended water for all asbestos surfaces.
- 5) Enough approved surfactant to properly wet down all asbestos. Wetting agent shall be mixed with water in exact concentration as recommended by the surfactant manufacturer.
- 6) Enough approved penetrating encapsulate to seal all clean asbestos abated substrates.
- 7) Sufficient HEPA vacuum cleaners to clean all visible asbestos from all surfaces of the work area during final cleanup.
- 8) Sufficient 6 mil, labeled polyethylene bags or impermeable, airtight drums to hold all waste produced throughout all stages of the Project.
- 9) Plexiglas vision panels when practical for each work area to view work activities. Vision panels to be kept clean during all work activities.
- 10) A minimum of four (4) 20lb BC fire extinguishers shall be on site at all times.

Part 3 – Execution

3.01 PREABATEMENT PROCEDURES

- A. Prior to starting asbestos abatement work, the Contractor shall post all required permits, notifications, and warning signs as required by applicable regulations.
- B. All electrical circuits and service in the work area shall be identified and turned off utilizing a 'lock-out, tag-out' procedure at service panel boxes in conformance with OSHA/WISHA Standards.
- C. Provide work area lighting and temporary electrical service as needed to provide a safe work area utilizing ground fault circuit interrupters in conformance with all electrical safety standards.
- D. Furnish and install critical barriers at all HVAC vents and openings.
- E. Pre-cleaning of all surfaces in the area of the enclosure shall be conducted by damp wiping/HEPA vacuuming prior to constructing the containment.

3.02 PERSONNEL PROTECTION

- A. Respirators – All personnel working inside the regulated area shall wear the appropriate respirators at all times as stipulated in WISHA and EPA Regulations. No person will enter a regulated area without wearing a proper respirator.
 - 1) No person inside the regulated area will remove his/her respirator at any time.
 - 2) All who enter the work area will have current documentation of respirator fit test. Fit test to match the brand and type of respirator used.
- B. Protective Clothing – Contractor to provide protective clothing to all employees and all authorized visitors at the job site. Such protective clothing includes but is not limited to full body disposable coveralls, boots, gloves, ear and eye protection, safety lines and harnesses, and hard hats.

- C. Outside Work Area Management – When any work is in progress inside a contained, regulated area there will be a person responsible for the management of the outside work area and equipment (air supply systems, HEPA machines, etc.)
- C. Emergency Exits – Contractor to provide a plan for review by the Owner of emergency exits from all regulated areas. Plan will be posted and all workers will be familiarized with emergency procedures.

3.03 DECONTAMINATION PROCEDURES

- A. All personnel who enter the contained regulated area will follow proper decontamination procedures each time they leave the work area.
- B. All tools and equipment will be thoroughly decontaminated by a combination of wet wiping and HEPA vacuuming and properly sealed prior to removing from the work area.
- C. All removed ACM will be double bagged and labeled for disposal in accordance with all applicable regulations.

3.04 REMOVAL OF ASBESTOS CONTAINING MATERIALS

- A. Remove all asbestos containing materials in complete and full compliance with all applicable regulations and industry standards.

3.05 WASTE DISPOSAL

- A. All asbestos waste shall be placed in either 2 properly labeled 6 mil polyethylene bags, wrapped in 2 layers of 6 mil poly with proper labels attached or a properly labeled 6 mil poly lined airtight drum. Double bagging (6 mil each) is required for all asbestos waste prior to removal from the Project site. Waste bags/containers shall carry the following label:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
AVOID BREATHING AIRBORNE ASBESTOS FIBERS

- B. Clearly label each container (bag, drum, etc.) with the date, name of the waste generator and generator's project number, Contractors name, name and affiliation of the Certified Asbestos supervisor, and the location at which the waste was generated.
- C. All debris containers moved out of the regulated work area shall be immediately deposited in a truck or dumpster which can be locked/secured against entry by unauthorized personnel.
- D. The waste hauler will have obtained all permits, licenses, or approvals required for hauling Hazardous material in Washington State.

END OF SECTION

SECTION 02 22 20

CHAIN LINK FENCING AND GATES

PART 1 - GENERAL

1.1 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - 1. A 392 - "Specification for Zinc-Coated Steel Chain-Link Fence Fabric."
 - 2. F 1083 - "Specification for Pipe, Steel, Black and Hot-Dipped Zinc Coated (Galvanized) Welded and Seamless, for Fence Structures."

1.2 RELATED SECTIONS

- A. Section 03300 Concrete- for concrete footings for fencing posts.

PART 2 – PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer shall have (5) five or more years experience in manufacturing galvanized after weaving (GAW) chain link fencing. All specifications for design, size, gage of metal parts and fabrication shall also be met.
- B. All pieces must be from a single source.

2.2 MATERIALS

- A. Zinc-coated steel, ASTM A 392, 9 gage wire, 2 inch mesh, one piece fabric widths, knuckled at both selvages. (note: finish gauge to be 9, inner wire 11 gauge acceptable).
- B. Steel Pipe: ASTM F 1083, standard weight galvanized pipe.
 - 1. Line Posts: 2-3/8 inch O.D. up to 8 feet.
 - 2. End, Corner, Pull, and Terminal Posts: 2-7/8 inch O.D. up to 8 feet.
 - 3. Top and Brace Rails: 1.660 inch O.D.
 - 4. Post Bracing: 1.680 inch O.D.
 - 5. Gate Posts: 2.875 inch O.D. leaves up to 6 feet, 4 inch O.D. leaves over 6 feet and up to 13 feet. 6-5/8" posts gates 13'- to 20' wide.
 - 6. Gate Frame: 1.90 inch O.D. tubular shaped with welded or steel fitted corners.
- C. Tie Wire: 11 gage galvanized coated steel.
- D. Accessories: Manufacturer's standard galvanized pressed steel or malleable iron.
 - 1. Post Tops: Designed as a weather tight closure cap for each type of post. Match post finish. Provide for passage of top rail with set screw retainer, as required,
 - 2. Gate Hinges: Non-lift-off type offset to permit 180 degree opening. Provide number and size of sufficient strength to support gate size.
 - 3. Gate Latches: Forked type with gravity drop; center gate stop and drop rod. Permit operation from either side. Provide padlock eye as integral part of latch.

2.3 FABRICATION

- A. Fabricate swinging and sliding gates in accordance with manufacturer's standards and as shown and specified.
 - 1. Fabricate with same frame and fabric as fence. Provide vertical, horizontal, and diagonal brace members as required for gate size and operation.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install fences and gates in accordance with manufacturer's instructions and reviewed Shop Drawings.
- B. Provide line and terminal posts of sufficient length to allow for 36 inch settings into concrete footings.
- C. Footing Diameters: 10 inch for line posts, and 12 inch for terminal posts.
- D. Space line posts at 8 feet maximum on centers.
- E. Set posts vertical and plumb in concrete footings. At gate posts extend footing to underside of bottom hinge.
- F. Install bottom tension wire prior to stretching fabric.
- G. Fabric:
 - 1. Leave 2 inches between bottom of fabric and finished grade.
 - 2. Pull fabric taut and tie to posts, rails, and tension wires.
 - 3. Install on security side of fence, anchor to framework such that fabric remains in tension after pulling force is released.
- H. Install fabric tie wire at 24 inches maximum on centers.
- I. Fence heights as shown or noted on the Drawings.
- J. Provide center rails at terminations and gates.
- K. Install gates plumb, level, and secure for full opening without interference. Adjust hardware for smooth operation, lubricate where necessary.

END OF SECTION

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, Supplementary Conditions and Divisions 0 and 1 Specification Sections, apply to work of this Section.

1.02 SECTION INCLUDES

- A. Reinforcing Steel
- B. Concrete Formwork, shoring and bracing.
- C. Cast in place concrete foundations, walls and structure.

1.03 RELATED SECTIONS

- A. Section 01 45 00 Quality Control
- B. Section 03 30 01 Concrete Floor Slabs
- C. Section 03 35 36 Polished Concrete

1.04 REFERENCES

- D. All references shall be the latest adopted edition.
- E. American Concrete Institute International:
 - 1. ACI 117 - Tolerances for Concrete Construction and Materials
 - 2. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
 - 3. ACI 301 - Specifications for Structural Concrete for Buildings
 - 4. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete
 - 5. ACI 305R Hot Weather Concreting
 - 6. ACI 306R Cold Weather Concreting
 - 7. ACI 308R Guide to Curing Concrete
 - 8. ACI 309R Guide for Consolidation of Concrete
 - 9. ACI 315 Details and Detailing of Concrete Reinforcement
 - 10. ACI 318 Building Code Requirements for Reinforced Concrete and Commentary
 - 11. ACI 347R Formwork For Concrete
 - 12. ACI 347.2R Guide for Shoring/Reshoring of Concrete Multistory Buildings
 - 13. ACI SP-66 ACI DETAILING MANUAL

- F. ASTM International:
1. ASTM C33 - Standard Specification for Concrete Aggregates
 2. ASTM C94 - Standard Specification for Ready-Mixed Concrete
 3. ASTM C143 - Standard Test Method for Slump of Hydraulic-Cement Concrete
 4. ASTM C150 - Standard Specification for Portland Cement
 5. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
 6. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete
 7. ASTM C494 - Specification for Chemical Admixtures for Concrete
 8. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
 9. ASTM C989 - Standard Specification for Slag Cement for Use in Concrete and Mortars
 10. ASTM C1059 - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete
 11. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
 12. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection and/or Testing
- G. Concrete Reinforcing Steel Institute:
1. CRSI – Manual of Standard Practice

1.05 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures, Shop Drawings, Project Data, and Samples
- B. Product Data: For each type of manufactured material and product indicated.
- C. Design Mixes: For each concrete mix, submit proposed mix designs minimum of 15 days in advance of placing operations for each type of concrete. Submitted mix designs shall include the following:
1. Supporting test data for mixes shall not be more than 12 months old. Include a sufficient number of tests, conduct a statistical analysis in compliance with ACI 301.
 2. Gradation of fine and coarse aggregates not more than 90 days old showing compliance with ASTM C33. No substitutions of aggregate type or size from those submitted shall be allowed.
 3. Proportions of all ingredients, including all admixtures added either at time of batching or at job site. Aggregate weights shall be based upon saturated surface dry conditions.
 4. Water/cement ratio.
 5. Slump as measured according to ASTM C143. Provide slump test for each mix.
 6. Air content of freshly mixed concrete as measured according to ASTM C231.

7. Strength measured at 7 and 28 days. Provide strength test for each mix at a frequency of both the 7th and 28th day. Strength shall be tested using 4" diameter X 8" cylinders in accordance with ASTM C31 and ASTM C39.
 8. Certifications that all ingredients in each mix are compatible.
 9. Locations or intended use of each mix design.
 10. Source of all materials.
- D. Material Certificates: Signed by manufacturer's certifying that each of the following items complies with the requirements:
1. Cementitious materials and aggregates. Include mill certificates for cement.
 2. Steel reinforcement and reinforcement accessories.
- E. Steel Reinforcement Shop Drawings: Details of fabrication, bending, and placement prepared according to ACI 315, "Details and Detailing of Concrete Reinforcement" and as follows:
1. Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement.
 2. Include special reinforcement required for openings through concrete structures.
 3. Provide placement details for all specific reinforcing intersections and clearance conditions not shown by the typical details on the structural drawings.
 4. Prepare drawings in sufficient detail to resolve all reinforcing intersections.
- F. Embedded Item Placement Drawings: Drawings indicating the location and type of plates, anchorages, or other items to be embedded in the finished concrete surfaces.
- G. Coordination Drawings for Mechanical and Electrical penetrations through concrete.
- H. ICBO reports for mechanical splice couplers.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: installers shall be experienced and have completed concrete work similar in material, design and extent to that indicated for this project, and whose work has resulted in construction with a record of successful in-service performance.
- B. Comply with reference documents unless more stringent provisions are indicated.
- C. Perform form work in accordance with ACI 347R, ACI 301, and ACI 318.
- D. Perform reinforcing steel installation in accordance with ACI 301.
- E. Perform concrete work in accordance with ACI 301 and ACI 318.

- F. Follow recommendations of ACI 305R when concreting during hot weather.
- G. Follow recommendations of ACI 306R when concreting during cold weather.
- H. Testing and Inspection: Testing and inspection shall be in conformance with Section 01 45 00.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Store materials in accordance with ACI 301.
 - 1. Admixtures stored at the project site longer than 6 months or which have been subjected to freezing shall not be used unless retested and proven to meet specified criteria.
- B. Deliver, store and handle steel reinforcement to prevent bending and damage.

1.08 COORDINATION AND SEQUENCING

- A. Coordinate schedule with other trades where embedment's, attachments or interferences occur.
- B. Schedule and sequence concrete work to coordinate with fabrication and delivery schedules for items to be embedded in concrete work.

1.09 FIELD MEASUREMENTS

- A. Verify that field measurements and conditions are as shown on drawings, shop drawing or as instructed by Product Manufacturer.

1.10 DESIGN RESPONSIBILITY: FORMWORK, BRACING, SHORING & RESHORING

- A. Contractor is responsible for designing and engineering formwork along with associated bracing, shoring and reshoring to withstand all imposed construction forces.

PART 2 - PRODUCTS

2.01 FORM MATERIALS

- A. Form Materials (for concrete not exposed to view): Provide per ACI 347R at discretion of Contractor.
 - 1. Typical plywood appropriate for slab on grade concrete. Minimum $\frac{3}{4}$ inch.

2.02 FORMWORK ACCESSORIES

- A. Shoring And Bracing: Provide bracing as required for straight and plum slab edges.
- B. Form Release Agent: Colorless, non-staining, shall not adversely affect surface coatings or waterproofing.

- C. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.

2.03 REINFORCEMENT

- A. Reinforcing Steel: As shown on Drawings.
- B. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gage.
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 - a. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete.
- C. Reinforcement – Fabrication:
 - 1. Fabricate concrete reinforcing in accordance with CRSI - Manual of Standard Practice.
 - 2. Fabricate in accordance with ACI 315, providing concrete cover as specified or indicated.
 - 3. Bending and straightening in accordance with ACI 318, Chapter 7, unless otherwise noted on the drawings. No bending or straightening of reinforcement permitted after partial embedment in concrete. Heating of reinforcement shall not be permitted unless approved in writing by Structural Engineer.
 - 4. Splicing: Lap splice reinforcing bars for tension; 30 inches for #4's, 36 inches for #5's and 43 inches for #6's.

2.04 CONCRETE MATERIAL

- A. Cement: Portland Cement: as specified on the Structural Drawings.
 - 1. Provide cement from same source for entire project.
- B. Slag Or Flyash:
 - 1. Slag Or Fly-ash - Select One Only:
 - a. Slag: Ground granulated blast furnace slag conforming to ASTM C989 Grade 100 or 120.
 - b. Fly-ash: Conform to ASTM C618, Class F.
 - c. Manufacturers:
 - 1) Boral Material Technologies, Inc.
 - 2) Full Circle Solutions, Inc.
 - 3) Headwater Resources, Inc.
 - 4) Holcim US, Inc.
 - 5) Lafarge North America
 - 6) Mineral Resources Technologies, LLC
 - 7) Mineral Solutions, Inc.
 - 8) The SEFA Group
- C. Aggregates:

1. Aggregates: Conform to the requirements of ASTM C33.
 - a. Do not use high alkaline content aggregates that would prevent slab surface from achieving a pH of 9 or less after curing and dehydration.
 - b. Provide aggregate from same source for entire project.
 - c. Comply with requirements for limits for deleterious substances and physical property requirements of aggregate per ASTM C33 for severe weathering.
- D. Water: Potable and complying with ASTM C94.

2.05 ADMIXTURES

- A. Admixtures:
 1. Admixtures certified by manufacturer to contain no more than 0.05 percent water-soluble chlorine ions by mass of cementitious material. Do not use admixtures containing calcium chloride or thiocyanate.
 2. Where more than one admixture is used in the mix, submit manufacturer's certification that admixtures are compatible in combination with cement and aggregates.
 3. Accelerating admixtures shall not be used.
- B. Air-Entraining Admixture: ASTM C260
 1. Master Builders *Micro-Air*
 2. W.R. Grace Daravair 1000

2.06 CONCRETE MIX DESIGN

- A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mixtures or field experience according to ACI 211.1 and ACI 301.
- B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for laboratory trial mix basis.
- C. Concrete mix design: comply with Structural Drawing requirements.
- D. Provide percentage by weight of cementitious materials other than Portland Cement in concrete.
- E. Minimum Requirements:
 1. Provide minimum cement content per ACI 301.
 2. Provide air-entrainment per ACI 301 or 2 percent minimum, whichever is greater. Footings and walls shall be considered severe exposure.
- F. Limit water soluble chlorine ion content in hardened concrete to 0.15 percent by weight of cement.
- G. Use admixtures according to manufacturer's written instructions.
- H. Maximum aggregate size is one-inch for walls.

2.07 MIXING

- A. Transit Mixers: Measure, batch, mix and deliver concrete according to ASTM C94, furnish batch ticket information.
 - 1. Batch Tickets: Include amount of water in batch from plant and remaining water that may be added at site, if any.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate and facilitate installation of embedded structural items.
- C. Coordinate and adjust concrete mix and additives to comply with requirements of manufacturers of coatings, sealants and adhesives applied to concrete.
- D. Coordinate and facilitate rough-in, openings and penetrations for Mechanical and Electrical items.

3.02 EXAMINATION

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

3.03 FORMWORK - ERECTION

- A. Erect formwork, shoring and bracing to achieve design requirements in accordance with the requirements of ACI 301. Construct formwork so concrete members and structures are of size, shape, alignment, elevation and position indicated within the tolerance limits of ACI 117.
- B. Provide bracing to ensure the stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads to provide support and limit deflection of formwork to specified criteria.
- C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
- D. Keep form joints to a minimum.
- E. Obtain approval before framing openings in structural members that are not indicated on drawings.
- F. Coordinate this Section with other sections of work that require attachment of components to formwork.
- G. Set edge forms, bulkheads and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Form openings,

chases, offsets, keyways and bulkheads required in work. Provide and secure units to support screed strips. Use strike-off templates or compacting-type screeds.

3.04 FORMWORK - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
 - 1. Protect reinforcing steel, inserts and bonding surfaces from application of any form release agent.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
- C. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings that are affected by form release agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

3.05 FORMWORK - INSERTS, EMBEDDED WORK, AND OPENINGS

- A. Provide formed openings required for work by other trades and items passing through concrete work.
- B. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions and directions furnished with items to be embedded.
 - 1. Install anchor bolts, accurately located, to elevations required.
 - 2. Install connection plates, angles, or other embedded items flush with concrete surface and at accurate locations per the approved embedded item placement drawings required in the "Submittals" article.
- C. Locate and set in place items that will be cast directly into concrete.

3.06 FORMWORK - CLEANING

- A. Clean forms as erection proceeds, remove foreign matter within forms.
- B. Clean formed cavities of debris prior to placing concrete.
 - 1. Flush with water or use compressed air to remove remaining foreign matter. Ensure water and debris drain to exterior through clean-out ports.
 - 2. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.
- C. Clean and repair surfaces of forms to be reused in the work.

3.07 FORMWORK - TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI 301 and so that concrete members and structures are of size, shape, alignment, elevation and position indicated within the tolerance limits of ACI 117.

3.08 FORMWORK - REMOVAL

- A. Formwork for sides of beams, walls, columns, foundations and similar parts of the work that does not support the weight of concrete may be removed after cumulatively curing at not less than 50 degrees F for 24 hours after placing concrete, provided concrete is hard enough to not be damaged by form removal operations and provided curing and protection operations are maintained.
- B. Leave formwork for beam soffits, slabs, joists and other structural elements that supports weight of concrete in place until concrete has achieved its 28-day design compressive strength.
- C. Comply with ACI 301 and ACI 318 recommendations in ACI 347R and ACI 347.2R for design, installation and removal of shoring and reshoring.

3.09 REINFORCEMENT - PLACEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
- B. Clean reinforcement of loose mill scale, earth, ice and other foreign matter.
- C. Accurately position, support and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain concrete cover and position.
- D. Defective Work: The following reinforcing steel work will be considered defective, and shall be removed and replaced:
 - 1. Bars with kinks or bends not shown in the drawings
 - 2. Bars damaged due to bending or straightening
 - 3. Bars heated for bending
 - 4. Reinforcement not placed in accordance with the drawings.
- E. Accommodate placement of formed openings.
- F. Bend all tie wire back behind line of rebar on weathering surfaces.
- G. Conform to applicable code for concrete cover over reinforcement.

3.10 CONCRETE - PREPARATION

- A. Verify forms are clean and free of rust before applying release agent.
- B. Coordinate placement of joint devices with erection of concrete formwork and placement of form accessories.

- C. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

3.11 CONCRETE - PLACEMENT

- A. Place concrete in accordance with ACI 304R, vibrate concrete thoroughly to eliminate voids, air pockets and rock pockets.
 - 1. Use equipment and procedures for consolidating concrete recommended by ACI 309R.
 - 2. Do not over-vibrate or use improper vibration methods or equipment that result in "bug holes" on face of concrete exposed to view.
- B. Before placing concrete, water may be added at project site only up to amount listed on batch ticket, subject to limitations of ACI 301. Total water in mix at time of placement shall not exceed amount specified in mix design. Do not add water to concrete after high range water-reducing admixtures have been added to mix at project site.
- C. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices are in place and will not be disturbed during concrete placement, and all required inspections have been performed.
- D. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.
- E. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
- F. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

3.12 CONCRETE – FINISHING

- A. Slab surface to be smooth and slope $\frac{1}{4}$ per foot to drain in the long direction.

3.13 CONCRETE - CURING AND PROTECTION

- A. Cure concrete in accordance with ACI 308; leave forms in place for as long as practicable after pouring concrete, but in no case less than 3 days. Coordinate with 3.08 above.
 - 1. Cure concrete long enough to ensure that 100% of the specified value for concrete properties are developed at 28 days.
- B. Protect concrete from damage after forms are removed; do not damage surface of concrete during removal of forms.

3.14 WORKMANSHIP

- A. Concrete shall be installed using the best workmanship, including the following:

1. Exposed to view wall surfaces free of waviness or deflection from inadequate form construction.
2. No tie wire or reinforcement within 1 inch of any concrete surface.
3. Corners aligned plumb and straight with consistent appearance.
4. Reveals in straight alignment.
5. Proper consolidation of concrete, free of rock pockets or voids.
6. Walls aligned straight, plumb and in a flat plane.
7. No unplanned horizontal cold joints within walls.

END OF SECTION

SECTION 06 10 00
ROUGH CARPENTRY

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including Supplementary Conditions and Divisions 0 and 1 Specification Sections, apply to work of this Section.

1.02 SECTION INCLUDES

- A. Rough Carpentry

1.03 REFERENCES

- A. All reference shall be the latest adopted edition, or as noted.
- B. AWPA C2 - Lumber, Timbers, Bridge Ties and Mine Ties--Preservative Treatment by Pressure Processes; American Wood-Preservers' Association
- C. AWPA C20 - Structural Lumber--Fire Retardant Treatment by Pressure Processes; American Wood-Preservers' Association
- D. PS 20 - American Softwood Lumber Standard.
- E. IEBC – International Building Code
- F. ICC – International Code Council
- G. WCLB (GR) - Standard Grading and Dressing Rules No. 17; West Coast Lumber Inspection Bureau
- H. WWPA G-5 - Western Lumber Grading Rules; Western Wood Products Association

1.04 QUALITY ASSURANCE

- A. Lumber: Comply with PS 20 and approved grading rules and inspection agencies.
 - 1. Acceptable Lumber Inspection Agencies: WCLB and WWPA.

1.05 DELIVERY, STORAGE & HANDLING

- A. Cover wood products to protect against moisture and growth of mold/mildew. Support stacked products to prevent deformation and to allow air circulation.

PART 2 - PRODUCTS

2.01 DIMENSION LUMBER

- A. Species: Douglas Fir/Larch.
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: Maximum 19 percent, stack or kiln-dried.
- D. Backing: 2 x 6 and larger solid lumber, cut from No. 2 Douglas Fir/Larch dimension lumber that is free of large knots, splits or other defects that would reduce the strength of the backing piece.

2.02 ACCESSORIES

- A. Fasteners, Anchors and Anchorbolts: As specified or noted on the drawings.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate the layout of wall, floor, ceiling and roof framing to accommodate the location of mechanical and electrical penetrations and recessed items and to minimize cutting framing members and/or framing openings in these assemblies.
- C. Coordinate the layout and location of wall framing and solid 2x wood backing for attachment of finish wood fabrications with Section 06 20 00.
- D. Coordinate the layout and location of wall framing and solid 2x wood backing required for attachment and support of Contractor and Owner furnished toilet and miscellaneous accessories shown on the Drawings and specified in Section 10 28 00.
- E. Coordinate the layout and location of wall framing and solid 2x wood backing to accommodate layout of cabinets and/or counter tops shown on the Drawings.
- F. Coordinate the layout and location of wall framing and solid 2x wood backing required for attachment and support of surface-mounted plumbing items specified.
- G. Coordinate the layout and location of wall framing and solid 2x wood backing required for attachment and support of surface-mounted electrical items specified.
- H. Coordinate the layout and location of wall framing and solid 2x wood backing

required for attachment and support of surface-mounted Owner Furnished Owner Installed (OFOI) items.

3.02 GENERAL

- A. Drilling, Notching & Cutting: Coordinate and control drilling, notching and cutting of all framing members required to admit or install work of other trades, do not violate the structural integrity of any wood framed members, comply with restrictions and requirements of Structural Engineer, IBC and local Building Official.
- B. Nailing: Nailing shall conform to the size and spacing shown on the Structural Drawings; where nailing is not indicated, provide nailing per IBC Table 2304.9.1. Fastener Schedule.

3.03 FRAMING INSTALLATION

- A. Cut and fit framing members accurately, set members level, plumb, and true to line. Discard crooked or twisted pieces or with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Wall Plates:
 - 1. Bottom plates bearing on concrete shall be preservative pressure treated.
 - 2. Bore holes of proper diameter for anchor bolts accurately; oversized or elongated holes are not acceptable.
 - 3. Install continuous sill gasket under bottom plates of exterior walls.
- C. Wall Framing: Cull out crooked, twisted or inconsistent width framing, align framing members so that finish walls are straight and free of waviness.
- D. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- E. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated on Drawings and Structural General Notes, but not less than required by applicable codes.
- F. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches of bearing at each end.
- G. Provide framing members at all vertical ends/edges of GWB and wall sheathing and at ends of floor sheathing.
- H. Frame wall openings required by the design and for work of other trades. Where not shown, provide a minimum two or more studs at each jamb; support headers on cripple studs; coordinate with requirements of Structural Drawings.
- I. Provide blocking between framing members wherever required by Drawings, IBC, Building Official, or good construction practice.

- J. Fire Stops: Install solid 2x lumber blocking fire stops (or other approved material) in accordance with the requirements of the IBC and the Building Official including, but not limited to the following locations:
 - 1. In concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor levels and at 10-foot intervals both horizontal and vertical.
 - 2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, cove ceilings and suspended lay-in ceilings.
 - 3. Concealed spaces behind combustible trim and finish: Fire stop at intervals not exceeding 10 feet.
 - 4. Concealed spaces behind exterior cornices or other elements: Fire stop at intervals not exceeding 20 feet.
 - 5. In wall framing in line with stair stringers and between stair stringers and wall.
- K. Provide additional framing members and/or modifications required to accommodate work of other trades.
- L. Provide backing and miscellaneous members as indicated or as required to support work provided by other trades (finishes, fixtures, specialty items, trim, etc.).

3.04 INSTALLATION - WOOD BACKING

- A. Provide backing and miscellaneous 2x framing members as indicated or as required to support work provided by other trades (finishes, fixtures, specialty items, trim, etc.).
- B. Door Hardware:
 - 1. Provide 2x6 wood backing for door wall stops.
- C. Casework/Counter tops: Provide solid 2x wood backing for attachment/support of casework.

3.05 DRILLING, CUTTING & NOTCHING

- A. Do not drill, cut, notch or alter any structural framing, except as noted on the Drawings and in this specification, without the approval of the Structural Engineer.

3.06 WORKMANSHIP

- A. Carpentry work shall be accomplished using the best workmanship, including the following:
 - 1. Crooked, bowed, twisted or damaged lumber culled out and used for blocking/backing.
 - 2. End cuts at proper angle and length for tight fit.

3. Nailed connections free of splitting or damage.
 4. Framing aligned plumb and square.
 5. Framing conforming to specified tolerances.
 6. Bolt/anchor holes not oversized or misaligned.
 7. Panel ends aligned at center of supporting framing member.
 8. Panel ends and edges properly gapped.
 9. Consistent nail spacing on panels.
- B. Any part of the carpentry work installed with improper or poor workmanship shall be removed and replaced at Contractor's expense.

3.07 TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum, provided other tolerances are met.
- B. Wall & Roof Plane (Flatness): Maximum of 1/4" in 10'-0" out of plane (this equates to no more than 1/8" gap at each end of a 10'-0" long straightedge center on high spot in wall, or no more than 1/8" gap at center of a 10'-0" long straightedge centered on low spot in wall).

END OF SECTION

**SECTION 06 20 00
FINISH CARPENTRY**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, Supplementary Conditions and Divisions 0 and 1 Specification Sections, apply to work of this Section.
- B. Drawings and general provisions of Contract, including General Conditions, Supplementary Conditions and Divisions 0 and 1 Specification Sections, apply to work of this Section.

1.02 REFERENCES

- A. American Plywood Association (APA).
- B. Architectural Woodwork Institute (AWI).
- C. United States Product Standard (PS).
 - 1. PS-1 - "Construction and Industrial Plywood."

1.03 SUBMITTALS

- A. Shop Drawings: Show materials, methods of fabrication, and details of installation.
- B. Samples: Furnish required samples with finishes specified.

1.04 QUALITY ASSURANCE

- A. Qualifications: Provide finish carpentry Work in accordance with AWI "Quality Standards," in the grades specified.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Interior Wood Trim:
 - 1. Pre-primed wood in sizes as shown on the drawings.
 - 2. Quarter inch thick Oak veneer plywood as indicated on drawings.
- B. Telephone Terminal Board: N/A.
- C. Shelving: N/A
- D. Fasteners:
 - 1. As shown, specified, and as required to securely install materials.
 - 2. Fasteners for Exterior Use: Aluminum.

3. Size of fasteners for wood detailing, siding and paneling shall be as recommended by manufacturer.

E. Joint Sealant: As specified in Section 07 90 00.

2.02 FABRICATION

- A. Conform with AWI "Quality Standards," Section 300, Custom Grade requirements as applicable. Standard wood moldings shall conform with Western Wood Product Association WP Series, where applicable.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install all millwork in accordance with reviewed shop drawings and AWI "Quality Standards."
- B. Cope internal corners and miter external corners at all standing and running trim.
- C. Provide running trim in as long lengths as practical. Make splices with 45 degree butt joints.
- D. Install materials straight and true. Leave 1/8 inch space between ends of exterior trim, seal joint. Tightly butt ends of interior trim.
- E. In exterior Work drive nail heads flush with surface of trim. Maintain nailing pattern in straight horizontal lines.
- F. In interior Work countersink nails and fill nail holes.
- G. Machine sand trim and finish with hand sanding. Leave free from machine or tool marks that will show through finishes specified. Ease all edges of trim.
- H. Install all finish hardware, accurately fit, securely apply, and carefully adjust to provide smooth and proper operation of all hardware.
- I. Miscellaneous Items: Install all items shown and specified, which are not called for to be installed under other Sections, to plumb, true, and level lines and positions. Install in accordance with details, manufacturer's printed instructions and additional requirements specified. Provide connections and miscellaneous items required to make Work of this Section complete. Securely fasten wall and ceiling mounted items to solid backing or blocking.

3.02 CLEANING

- A. Remove dirt and other foreign matter from installed materials.
- B. Upon completion of installation, leave materials clean and ready for finishing.

END OF SECTION

SECTION 07 21 00
BUILDING INSULATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions, Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Thermal Batt Insulation
- B. Sound Batt Insulation
- C. Vapor Retarder; N/A

1.03 REFERENCES

- A. All references shall be the latest adopted edition.
- B. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
- C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials
- E. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials
- F. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials; National Fire Protection Association

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Submit manufacturer's data sheet for each product specified.

1.05 ENVIRONMENTAL REQUIREMENTS

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

PART 2 - PRODUCTS

2.01 BATT INSULATION MATERIALS

- A. Thermal Insulation: Unfaced with out membrane facing, Mineral fiber type manufactured from glass, ASTM C 665, Type I, max flame spread 25 – 50, glass fiber rolls and batts. Width to fit stud, truss or joist spacing.
- B. Thermal Insulation: Faced mineral fiber blanket/batts, ASTM C 665, Type III, Class A, Blankets with reflective vapor retarder membrane facing, foil scrim kraft vapor retarder, maximum flame spread 25 or less. Width to fit stud, truss or joist space
- C. Sound Attenuation Blanket Insulation: ASTM C 665, Type I blankets without membrane facing. maximum flame spread 25 or less. Width to fit stud, truss or joist space. R-Value R-11.

2.02 VAPOR BARRIER

- A. Sheet Retarder: Basis of design is Certainteed MemBrain, The SMART Vapor Retarder, Duraskim or approved substitution. Polyimide film vapor retarder for use with unfaced, vapor permeable glass fiber and mineral wool insulation in wall and ceiling cavities. Material has a permeance of 1 perm or less when tested to ASTM E 86, dry cup method and increases to greater than 10 perms using the wet cup method
 - 1. Water Vapor Permeance:
 - a. ASTM E 86, dry cup method: 1.0 perms (57ng/Pa*s*m2).
 - b. ASTM E 86, wet cup method: 10.0 perms (1144ng/Pa*s*m2).
 - 2. Fire Hazard Classification: ASTM E 84:
 - a. Maximum Flame Spread Index; 20.
 - b. Maximum Smoke Developed Index; 55.

2.3 ACCESSORIES

- A. Tape For Vapor Retarder Joints: Polyethylene self-adhering type, 2 inches wide. As recommended by vapor barrier manufacturer. Manufacturer to be 3M 8087 CW or approved substitution.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.

- B. Schedule installation of batt insulation to occur after building is fully enclosed and materials dried out; coordinate with Building Acclimatization And Dry Out specified in Section 01 50 00.

3.02 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation materials are completely dry and that substrates are ready to receive insulation.
 - 1. Do not start installation of any insulation until building structure and interior is dried out and that moisture condensation within the insulation or on interior side of exterior sheathing does not occur.
 - 2. Perform moisture testing on building structure/materials to confirm moisture content.
- B. Start of insulation installation indicates approval of substrate and site conditions, including dry out of building structure and materials.
 - 1. Moisture condensation problems that occur within insulated spaces are the responsibility of this Section to correct, including replacement of materials damaged by water or mold.

3.03 INSTALLATION - THERMAL BATT INSULATION

- A. Install insulation in accordance with manufacturer's instructions. Friction fit in cavities and spaces to prevent displacement or sagging.
- B. Insulate the entire perimeter of the building exterior without gaps or voids. Do not compress insulation.
- C. Where wall framing is deeper than the insulation, place the batt tight to the exterior wall sheathing (leaving a void space on the interior, warm side of the batt).
- D. Trim insulation neatly to fit spaces. Insulate miscellaneous cavities, gaps and voids.
- E. Fit insulation to the exterior side of mechanical and electrical services within the plane of the insulation. Leave no gaps or voids.
 - 1. Where mechanical piping will not allow installation of insulation to the exterior side and prevent freezing, report condition to Division 22 installer for correction before insulating or closing up the space.
- F. Install to R-values as indicated on the Drawings.

3.04 INSTALLATION - SOUND INSULATION

- A. Install insulation in accordance with manufacturer's instructions. Friction fit in cavities and spaces to prevent displacement or sagging.
- B. Insulate the entire width/height of the wall/floor assembly without gaps or voids. Do not compress insulation.

- C. Trim insulation neatly to fit spaces. Insulate miscellaneous cavities, gaps and voids.
- D. Coordinate and monitor installation during GWB installation so as to prevent displacement or removal of batts.

3.05 INSTALLATION - VAPOR RETARDER AT THERMAL BATT INSULATION

- A. Install vapor retarder membrane in a continuous unbroken sheet over warm side of thermal batt insulation in exterior walls.
 - 1. Installation of vapor retarder shall follow immediately after installation of insulation.
- B. Lap ends and side flanges of membrane over framing members and seal with continuous tape.
- C. Run vapor retarder over electrical outlet boxes and other openings in wall and cut out after installation for airtight fit.
- D. Tape seal tears or cuts in vapor retarder for continuous unbroken vapor retarder.
- E. Extend vapor retarder into window, door and other openings in exterior walls; overlap and seal airtight to exterior flexible flashing. Tape seal in place.

3.06 PROTECTION OF FINISHED WORK

- A. Do not permit installed insulation to be damaged prior to its concealment.

3.07 SCHEDULE

- A. See drawings for all other insulation R-values and locations.

END OF SECTION

SECTION 07 84 00

FIRESTOPPING/SMOKE SEAL SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 WORK INCLUDES

- A. Firestopping and Smoke Seal Systems

1.03 SCOPE OF WORK

- A. Provide Firestopping/Smoke Seal System(s) conforming to IBC, ASTM E814 and requirements of the authority having jurisdiction at the following locations:
 - 1. Around structural, mechanical, electrical and other penetrations through fire rated assemblies.
 - 2. At cracks, gaps and openings in fire rated assemblies.
 - 3. At perimeter of fire rated assemblies where there are cracks, gaps, voids or openings.

1.04 REFERENCES

- A. All references shall be the latest adopted edition, except as noted.
- B. ASTM E814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops
- C. ITS (DIR) - Directory of Listed Products; Intertek Testing Services NA, Inc.; current edition
- D. FM P7825 - Approval Guide; Factory Mutual Research Corporation; current edition
- E. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition
- F. IBC – International Building Code, 2018
- G. WH (CERT) - Certification Listings; Warnock Hersey

1.05 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.

1.06 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping/smoke seal system designs which provide the required fire ratings when tested in accordance with ASTM E814.
 - 1. Listing in the current classification or certification books of UL, FM, or ITS (Warnock Hersey) will be considered as constituting an acceptable test report.
- B. Installer Qualifications: Installer shall have at least 5 years of experience installing firestop systems in buildings of similar construction to that found on this project.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years experience.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation.

PART 2 - PRODUCTS

2.01 FIRESTOPPING/SMOKE SEAL SYSTEMS

- A. Manufacturers/Product Group and ICC Evaluation Service Report Number:
 - 1. 3M Company, Inc. *Fire Protection Products* – ICC Report NER-243
 - 2. Tremco, Inc. *Through-Penetration Fire-Stop Systems* – ICC Report ER-3198
 - 3. United States Gypsum Company *USG Firestop Penetration Systems* - ICC Report ER-5050
 - 4. W.R. Grace & Company *FlameSafe Products* – ICC Report ESR-1043
- B. Firestopping/Smoke Seal System(s): Provide complete Firestop/Smoke Seal System(s) that conform to the requirements of Chapter 7 of the International Building Code (IBC) and are designed, tested and fire-resistance rated to resist for a prescribed period of time the spread of fire through each different type of penetration, fire rated assembly and construction type found in this Project.
 - 1. Firestop/Smoke Seal System(s) shall be tested and listed by one of the testing agencies listed in 1.04 above.
 - 2. The F and T rating criteria for the Firestop/Smoke Seal System(s) shall be in accordance with ASTM E814 and IBC.
 - 3. Firestopping/Smoke Seal Exposed To View: Firestop/Smoke Seal System must either be concealed from view behind the finish; or have an appearance matching the adjacent finish appearance and be paintable; or have a suitable finished trim or escutcheon to cover the firestopping.
 - 4. Provide firestopping/smoke seal products from the same manufacturer on any single assembly or condition, do not mix different manufacturer's products.

- C. Rock Wool: Rock wool insulation spun from slab or basalt rock; 2.8 pound density, with formaldehyde-free binder, friction fit, unfaced, conform to ASTM C665; Roxul *AFB* or approved.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate the timing of when to execute the work of this section with the work of other trades.
- C. Coordinate firestopping/smoke seal at mechanical and electrical penetrations made by Divisions 20 through 28.

3.02 EXAMINATION

- A. Verify that all penetrations and openings are completed and ready to receive the work of this section.

3.03 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that may affect bond of firestopping material in accordance with manufacturer's instructions.
- B. Remove incompatible materials that may affect bond.

3.04 INSTALLATION

- A. Select the specific firestopping/smoke seal assembly that will provide the specific fire rating required for the type of construction and conditions found and that conforms to the criteria stated in the testing agency listing.
- B. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing cracks/gaps and providing a firestop of each gap/crack in a fire-rated assembly equal to the fire rating of the assembly.
- C. Where firestopping/smoke seal is exposed to view, finish to match adjacent surfaces.

3.05 CLEANING AND PROTECTION

- A. Clean adjacent surfaces of firestopping/smoke seal materials.

- B. Protect adjacent surfaces from damage by material installation.

3.06 FIRESTOPPING LOCATIONS

- A. Install firestopping/smoke seal in all locations required by the IBC and Authorities Having Jurisdiction.
- B. Install firestopping/smoke seal at cracks, gaps or openings within and around perimeter of fire rated wall, floor or roof assemblies (refer to Drawings for location of rated assemblies).
- C. Install firestopping/smoke seal around penetrations (structural, mechanical and electrical) through fire rated assemblies; coordinate with structural mechanical and electrical work.
- D. Install firestopping/smoke seal wherever noted on Drawings.

END OF SECTION

SECTION 07 92 00
SEALANTS AND CAULKING

PART ONE – GENERAL

1.1 SECTION INCLUDES

- A. Sealant as required at hollow metal door frames and other transitions.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM C 920-87 Elastomeric Joint Sealants.
- B. Federal Specifications (FS):
 - 1. TT-S-00227E Sealing Compound, Elastomeric Type, Multi-Component (for Caulking, Sealing, and Glazing in Buildings and Other Structures).
 - 2. TT-S-00230C Sealing Compound, Elastomeric Type, Single Component (For Caulking, Sealing, and Glazing in Buildings and Other Structures).
 - 3. TT-S-001543A Sealing Compound: Silicone Rubber Base (For Caulking, Sealing, and Glazing in Buildings and Other Structures).

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, joint preparation and installation instructions, and color charts for each product required.
- B. Submit sealant manufacturer's certification that submitted products are in compliance with specified requirements and are appropriate for project applications.

1.4 QUALITY ASSURANCE

- A. Product Labels: Include manufacturer's name, type of sealant and color on labels of containers.
- B. Single Source Responsibility for Joint Sealer Materials:
 - 1. Obtain joint sealer materials from single manufacturer for each different product required.
 - 2. Provide primers, joint sealers, 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 testing and field experience as supplied and warranted by one manufacturer.
 - 3. Provide joint sealers that have been produced and installed to establish and maintain watertight and airtight continuous seals.

- C. Installer Qualifications: Installer having not less than five years successful experience in comparable projects and employing personnel skilled in operations required for project.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original containers with seals unbroken and labels intact.
- B. Store materials in a single lockable area of project site.
- C. Protect materials from extreme temperatures and exposure. Store in accordance with manufacturer's recommendations. Accept delivery of material with clear markings of shelf life date.

1.6 PROJECT CONDITIONS

- A. Environment: Comply with sealant manufacturer's recommended minimum and maximum installation temperatures and other weather protection.

PART TWO – PRODUCTS

2.1 SEALANT

- A. Polyurethane Sealant (Sealant A):
 - 1. Single component, non-sag, nonstaining, non-bleeding, self-priming, FS TT-S-00230, Type II, Class A.
 - 2. Color: As selected by Architect/Owner.
 - 3. Acceptable Manufacturers:
 - a. Dynatrol I, Pecora Corp.;
 - b. Sonolastic NP1, Sonneborn Building Products Corp.;
 - c. Dymonic, Tremco Products Corp.;
 - d. Sika IA, Sika Corp.;
 - e. Bostik 900, Bostik, Inc.
 - f. Vulkem
 - f. Or Approved equal.
- B. Polyurethane Sealant (Sealant B):
 - 1. Multi-component, non-sag, self-priming, FS TT-S-00227, Type II, Class A.
 - 2. Color: As selected by Contract Administrator.
 - 3. Acceptable Products:
 - a. Dynatrol II, Pecora Corp.;
 - b. Sonolastic NP2, Sonneborn Building Products Corp.;
 - c. Dymeric, Tremco Products Corp.;
 - d. Chem-Calk 500, Bostik, Inc.; or
 - e. Approved equal.

2.2 RELATED MATERIALS

- A. Joint Cleaner: Noncorrosive, nonstaining type, compatible with joint forming materials, as recommended by sealant manufacturer.

- B. Joint Backing: Closed cell polyethylene foam rod, over-sized 30 to 50 percent for joint size, compatible with sealant, sized and shaped to provide proper compression upon insertion in accordance with manufacturer's recommendations.
- C. Bond Preventive Materials: Pressure sensitive adhesive polyethylene strip recommended by sealant manufacturer to suit application.
- D. Primer: Nonstaining type as recommended by sealant manufacturer to suit application.
- E. Masking Tape: Nonstaining, nonabsorbent type compatible with sealant and surfaces adjacent to joints.
- F. Vent Tubes: Plastic tubing, 1/4 inch inside diameter.

2.3 MIXING

- A. Mix multi-component products as directed by manufacturer. Mixing instructions shall be included in the project submittal.

PART THREE – EXECUTION

3.1 EXAMINATION

- A. Examine building and grounds to determine each type of joint and conditions affecting removal of existing sealant or mortar and application of new sealant.
- B. Examine joints for defects that would adversely affect quality of installation.

3.2 APPLICATION

- A. Joint Size: Examine joint dimensions and size materials to achieve required width-to-depth ratio as recommended by sealant manufacturer.
- B. Joint Backing:
 - 1. To achieve required joint depths, restrict depth of joints by use of joint backer rod.
 - 2. Size backer rod to allow for 25 percent minimum compression of the backer rod when installed.
 - 3. Where joint backing material is not feasible due to insufficient clearance or where mortar is partially removed, install bond preventive material in joint.
 - 4. Three-sided adhesion of sealant is not permitted.
- C. Sealant:
 - 1. Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates.
 - 2. Apply sealant in uniform continuous bead without gaps or air pockets, following manufacturer's instructions for each specific type of sealant.

3. Provide uniform cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.

D. Tooling:

1. Tool joints to required configuration in accordance with manufacturer's recommendations.
2. Tooling Non-sag Sealants:
 - a. Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration required.
 - b. Eliminate air pockets and ensure contact and adhesion of sealant with sides of joint.
 - c. Remove excess sealant from surfaces adjacent to joint.
 - d. Do not use tooling agents, which discolor sealants or adjacent surfaces or are not approved by manufacturer.

3.4 ENDLAP SEALING

- A. All sheet metal endlaps shall be sealed. Sealant bead shall be a minimum of $\frac{1}{2}$ " wide and shall be centered $\frac{3}{4}$ " from the outside edge of the overlap.

3.5 ADJUSTING

- A. If damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and reseal joints with new materials to produce joint sealer installations with repaired areas indistinguishable from original work.

3.6 CLEANING

- A. Remove excess sealant from adjacent surfaces immediately after contact with xylene or toluene.
- B. Remove debris and containers from jobsite.

3.6 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.

END OF SECTION

SECTION 08 11 00

HOLLOW METAL FRAMES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Interior Hollow Metal Frames

1.03 REFERENCES

- A. All references shall be the latest adopted edition (except where edition date is specifically noted).
- B. ANSI/SDI A250.4 – Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frame Anchors and Hardware Reinforcing.
- C. ANSI/SDI A250.6 – Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
- D. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
- E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
- F. ASTM A568 - Standard Specification for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for.
- G. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- H. ASTM A879 - Specification for Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface.
- I. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
- J. ASTM A1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.
- K. ASTM A1011 - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon,

Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability

- L. ASTM D3359 – Standard Test Methods For Measuring Adhesion By Tape Test
- M. DHI A115.1G - Installation Guide for Doors and Hardware; Door and Hardware Institute.
- N. IBC – International Building Code, 2021 Edition
- O. SDI 111-D – Door, Frame And Hardware Schedule For Standard Steel Doors And Frames.
- P. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Provide manufacturer's product literature and standard details.
 - 1. Provide manufacturer's technical data sheet on each different type of anchor and hardware reinforcement required.
- C. Shop Drawings: Provide elevation and details of each different frame and door type, including frame anchors, glass stops, vision panels, and special conditions.
- D. Door Schedule: Provide door, frame, and hardware schedule on format matching SDI 111-D in accordance with Door Schedule included on Drawings.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide all products from a single manufacturer who is a member of the Steel Door Institute.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Protect products from moisture, construction traffic, and damage.
- B. Store vertically under cover. Do not use non-vented plastic or canvas shelters. Should wrappers become wet, remove immediately.
- C. Place units on 4 inch high wood sills or in a manner that will prevent rust or damage. Provide 1/4 inch space between doors to promote air circulation.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Manufacturers: Member of Steel Door Institute with products conforming to these specifications. Acceptable manufacturers include:
 - 1. Ceco Corporation

2. Republic Builders Products
 3. Steelcraft Manufacturing Company
 4. Substitutions: See Section 01 60 00 Product Requirements
- B. Steel Sheet for Doors and Frames:
1. Cold Rolled Steel: ASTM A1008 and ASTM A586.
 2. Hot Rolled Steel: Pickled and oiled, ASTM A1011 and ASTM A586.
 3. Galvanized Steel: ASTM A924 and A653; hot-dipped zinc-coated steel.
- C. Steel Sheet for Anchors and Accessories: Electrolytically deposited zinc coated steel; ASTM A879, coating 40Z (12G), minimum.
- D. Grout/Mortar Fill:
1. Interior Frames: Spray Foam.

2.02 HOLLOW METAL (HM) DOORS AND FRAMES

- A. Frames: ANSI/SDI A250.8 Level 3 is the minimum performance standard; provide the following special requirements that exceed this minimum standard:
1. Regular Use Frames: 16 gauge steel sheet, fabricated to size, profile and configuration shown on Drawings.
 2. All Exterior Door Frames: 14 gauge steel sheet, fabricated to size, profile and configuration shown on Drawings. Corner Construction: Face weld corners, grind welds flush and smooth.
 3. Provide temporary removable spreader bars on bottom of each frame.
 4. Reinforcement For Hardware: Conform to ANSI/SDI A250.6 and the following special requirements:
 - a. Hinge Reinforcement: Provide 7 gauge hinge reinforcement in doors, full width of frame (lesser gauge with equivalent threads is not acceptable). Weld reinforcement securely to frame.
 - b. Floor Anchors: Provide 14 gauge floor anchors on all frames, full width of frame, securely welded to foot of each frame leg, with 2 holes in each anchor for attachment to floor.
 - c. Closer: Provide reinforcement sleeve full width of frame, formed to match frame profile.
 5. Holes For Silencers: Drill stops to receive rubber silencers on frames not scheduled for weatherstripping or smoke gasket.

2.03 FABRICATION

- A. Confirm field conditions and coordinate depth of each frame throat to match thickness of wall or other configuration shown on Drawings.
- B. Fabricate steel doors and frames to sizes and profiles shown on the Drawings in conformance to the requirements of this Section, ANSI/SDI A250.6, ANSI/SDI A250.8 and fire listing requirements.
- C. Prepare and reinforce steel doors and frames to receive door hardware specified in Section 08 71 00.
- D. Finish:

1. Factory Prime Paint Finish: Prime paint all surfaces of doors and frames under controlled conditions at the factory.
 - a. Doors and frames shall be thoroughly cleaned, and chemically treated to insure maximum paint adhesion.
 - b. All surfaces of the door and frame exposed to view shall receive a factory applied coat of rust inhibiting primer, either air-dried or baked-on.
 - c. The finish shall meet the requirements for acceptance stated in ANSI/SDI A250.10.
2. Shop Prime Paint Touch-Up: Repair any factory applied prime paint damaged by shipping or by shop modifications to doors/frames.
 - a. Surface preparation, prime paint and application shall conform to factory finishing standards and be compatible with field painting specified in Section 09 90 00.
 - b. The finish shall meet the requirements for acceptance stated in ANSI/SDI A250.10.
3. Performance Requirement: Primer bond to steel substrate shall pass adhesion field testing per ASTM D3359, Type A Cross Hatch.

2.04 DOOR AND FRAME CLEARANCES

- A. Door and frame clearances shall conform to ANSI/SDI A250.8, 2.06.

2.05 SPRAY FOAM

- A. Spray Foam: Single component polyurethane foam sealant which expands to take the shape of cracks and voids and permanently seals to substrate surfaces.
 1. Code Approval: ICC Evaluation Service, Inc. ES Report ESR-1961.
 2. Fire Performance:
 - a. Flame Spread Index Per ASTM E84: 25 or less
 - b. Smoke Developed Index Per ASTM E84: 450 or less
 3. Thermal Barrier: None required when tested in accordance with UL 1715.
 4. Manufacturer/Product: Dow Chemical Company "Great Stuff"
 - a. Select the specific Great Stuff product and canister size to best fit the application and site conditions.
 - b. Use the Great Stuff Pro Window & Door minimal expanding, low pressure spray foam to prevent displacement or deflection of frames.
 5. Installation: Use Dow foam dispensing guns for installing spray foam, do not install with the disposable plastic straw provided.
 6. Do not fill door frames that might have electrical components inside until such components are installed and then verify with Owners rep whether these frames should be left unfoamed.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate with Flush Wood Doors Section 08 14 00.
- C. Coordinate door frame foam installation with door frames that have electrical components.

3.02 EXAMINATION

- A. Verify that substrate and project conditions are suitable before beginning installation of frames.
- B. Correct unsatisfactory condition before proceeding with installation.
- C. Start of installation indicates acceptance of substrate and conditions.

3.03 SOLID GROUTING FRAMES

- A. Interior Frames: Fill with Spray Foam. Verify those that may have electrical components prior to application of foam.

3.04 INSTALLATION

- A. Install frames plumb, level, rigid, and in true alignment as recommended in ANSI/SDI 250.11, NFPA 80, DHI A115.1G and in accordance with fire labeling requirements on fire rated openings.
- B. Secure floor anchors to floor with steel anchors/screw of size, length and type appropriate for permanently secure attachment to substrate material, 2 anchors per jamb anchor.
- C. Screw jamb anchors securely to wall framing/structure using method recommended by manufacturer for permanently secure installation.
- D. Exposed Jamb Anchor Screws: Grind head of screw flush with frame and fill with polyester patching/filling compound (body filler) and sand surface flush and smooth to conceal screw and dimple.
- E. Coordinate installation of glazing, stops and vision panel frames by Section 08 80 00.
- F. Install doors plumb and in true alignment and fasten to achieve the maximum operational effectiveness and appearance of the unit. Maintain clearances specified In ANSI/SDI 250.8.

3.05 ADJUST AND CLEAN

- A. Adjust doors for proper operation, free from binding or other defects.
- B. Clean and restore soiled surfaces. Remove scraps and debris, and leave site and a clean condition.

3.06 SCHEDULE – REFER TO DRAWINGS

END OF SECTION

SECTION 08 14 00
FLUSH WOOD DOORS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Flush Hardwood Veneer-Faced Solid Core Wood Doors

1.03 REFERENCES

- A. All references shall be the latest adopted edition, except as noted.
- B. ANSI/WDMA I.S.1-A – Architectural Flush Wood Doors (Window & Door Manufacturer’s Association)
- C. ASTM E90 – Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- D. AWI - Architectural Woodwork Quality Standards; Architectural Woodwork Institute
- E. IBC – International Building Code, 2021 Edition

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Submit manufacturer’s product literature, indicate door core materials and construction; veneer species, plastic laminate, type and characteristics. Submit manufacturer’s product data on metal vision panel frames.
- C. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, factory machining criteria, finishing system criteria, identify cutouts for glazing.
- D. Door Schedule: Provide door, frame, and hardware schedule on format matching SDI 111-D in accordance with Door Schedule included on Drawings.
- E. Samples – Hardwood Veneer: Submit two samples of each different type of hardwood veneer specified, 8 x 11 x 1/4 inch in size illustrating species, wood grain and finish system.

- F. Test Report: Submit copy of test report form independent testing laboratory certifying the STC rating of the sound rated doors.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with ANSI/WDMA I.S.1-A.
- B. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum ten years of experience.

1.06 DELIVERY, STORAGE, AND PROTECTION

- A. Accept doors on site in manufacturer's packaging. Inspect for damage.
- B. Protect doors with individual resilient packaging. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer. Break seal on site to permit ventilation.

1.07 PROJECT CONDITIONS

- A. Coordinate the work with door opening construction, door frame and door hardware installation.

1.08 WARRANTY

- A. Provide manufacturer's warranty for the following term:
 - 1. Interior Doors: Life of installation.
- B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. LyndenDoor
- B. Oregon Door
- C. Vancouver Door (Puyallup)
- D. VT Industries
- E. Substitutions: Refer to Section 01 60 00 - Product Requirements.

2.02 FLUSH WOOD DOORS

- A. Flush Wood Doors: Bonded Core 5 or 7 ply doors conforming to ANSI/WDMA I.S.1-A and the following:
 - 1. Grade: WDMA Premium Grade
 - 2. Duty Level: WDMA Extra Heavy Duty

3. Stiles and rails bonded to core
 4. Core: Structural composite lumber core (engineered wood) or particleboard cores.
 - a. Hardware Blocking – Particleboard Core: Provide solid wood blocking for hardware attachment (not required for structural composite lumber core).
 5. Stiles And Rails: 1 inch minimum thickness solid hardwood, finger-jointing not allowed; vertical edge species solid hardwood matching face veneer species.
 6. Door Facing: Hardwood veneer.
- B. Sound-Rated Doors (Where Noted On Drawings): STC-42 minimum Sound Transmission Class when tested in accordance with ASTM E90.

2.03 MATERIALS

- A. Door Face Veneer: Hardwood veneer suitable for transparent finish:
1. Hardwood Veneer Species: Maple or Birch.
 2. Veneer Cut: Plain sliced.
 3. Leaf Matching: Book match veneer leafs, balance matched on width of door face.

2.04 FABRICATION

- A. Fabricate doors in accordance with ANSI/WDMA I.S.1-A requirements.
- B. Fabricate fire rated doors in accordance with fire testing agency requirements. Attach metal fire rating label to door.
- C. Vertical Exposed Edge of Stiles - Solid Edge: Of same species as veneer facing.
- D. Bond edge banding to cores.
- E. Bevel strike edge of door.
- F. Coordinate size of door and edge clearances with frames specified in Section 08 11 00 and hardware specified in Section 08 71 00 so that field planing door edges for proper fit is not required.
- G. Factory machine doors for finish hardware specified in Section 08 71 00 in accordance with hardware requirements and dimensions. Do not machine for surface hardware.
- H. Cut out openings for vision panel frames or louvers where indicated on drawings.
- I. Door Undercuts: Provide undercuts to accommodate door hardware provided by Section 08 71 00 and as required by applicable codes.
- J. Factory fit doors for frame opening dimensions.
- K. Provide edge clearances in accordance with AWI 1300.

2.05 FACTORY FINISH

- A. Transparent Finish: Factory finish doors in accordance with ANSI/WDMA I.S.1-A Premium Grade:
 - 1. Finish System: TR-6 Catalyzed Polyurethane, including reduced vinyl sealer washcoat (if required), washcoat, stain, vinyl sealer, sanding with 220 grit, first topcoat and second topcoat; satin finish. UV Curable Polyester or Urethane finish systems are also acceptable.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.

3.02 EXAMINATION

- A. Inspect frames and existing conditions before starting work.
- B. Verify that frames, opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.
- D. Beginning of installation indicates acceptance of frame installation and conditions.

3.03 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and WDMA installation requirements.
 - 1. Install fire-rated doors in accordance with NFPA 80 requirements and fire listing.
- B. Gap between bottom of door and floor shall not exceed 5/8 inch on non-rated doors; on fire rated doors gap shall not exceed code and fire listing requirements.
- C. Coordinate installation of doors with installation of frames specified in Section 08 11 00 and hardware specified in Section 08 71 00.

3.04 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

END OF SECTION

SECTION 08 41 13

ALUMINUM STOREFRONT AND ENTRANCES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Aluminum Framed Entrance And Storefront Systems

1.03 RELATED SECTIONS

- A. Section 07 27 00 Self-Adhering Water-Resistive Air Barrier Membrane
- B. Section 08 71 10 Door Finish Hardware

1.04 REFERENCES

- A. All references shall be the latest adopted edition (except where edition date is specifically noted).
- B. AAMA 607.1 - Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum
- C. ASTM A36 - Standard Specification for Carbon Structural Steel
- D. ASTM B221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes
- E. ASTM B308 – Standard Specification for Aluminum-Alloy 6061-T6 Standard Structural Profiles
- F. ASTM C509 – Standard Specification for Elastomeric Cellular Preformed Gasket and Sealing Material
- G. ASTM C864 – Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks and Spacers
- H. ASTM E283 – Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
- I. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

- J. ASTM E331 – Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- K. IBC – International Building Code, 2018 Edition

1.05 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Provide manufacturer's data on frames, doors and hardware.
- C. Shop Drawings:
 - 1. Indicate layout and dimensions; head, jamb, and sill conditions; elevations; components, anchorage, recesses, materials, and finishes.
 - 2. Identify installation tolerances required, assembly conditions, routing of service lines and conduit, and locations of operating components and boxes.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of experience.
- B. Installer Qualifications: Company specializing in the installation of products specified in this section on projects of similar scope and complexity, with not less than five years of documented experience. Upon request, provided listing of all projects completed within the last two years along names and contact information of general contractors and building owner representative for each project.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Protect finished surfaces as necessary to prevent damage.
- B. Do not use adhesive papers or sprayed coatings which become firmly bonded when exposed to sun.
- C. Do not leave coating residue on any surfaces.
- D. Replace damaged units.

1.08 WARRANTY

- A. Contractor shall warranty installed storefront system and windows for a period of 5 years to be watertight and free of leaks, free from defective materials, defective workmanship, glass breakage due to defective design, and shall replace any components that fails or is found to be defective upon notification by the Owner. Warranty shall cover the following:
 - 1. Complete watertight and airtight system installation within specified tolerances.
 - 2. Completed installation will remain free from rattles, wind whistles and noise due to thermal movement and wind pressure.

3. System is structurally sound and free from distortion.
 4. Glass and glazing gaskets will not break or "pop" from frames due to design, wind load pressure, expansion or contraction movement or structural loading.
 5. Glazing sealants and gaskets will remain free from abnormal deterioration or dislocation due to sunlight, weather or oxidation.
- B. Thermal Break Structural Integrity Warranty: Provide 10 Year manufacturer's warranty against failure resulting from longitudinal or transverse shrinkage, cracking or loss of adhesion or prescribed pressure on the glazed material.

PART 2 - PRODUCTS

2.01 ALUMINUM STOREFRONT AND ENTRANCE DOORS

- A. Installed Storefront System Performance Requirements:
1. Air Infiltration: Not exceeding 0.06 CFM per square foot of fixed area when tested at differential static pressure of 6.24 P.S.F. in accordance with ASTM E283.
 2. Water Infiltration: No water penetration at 10 P.S.F. when tested in accordance with ASTM E331.
 3. Structural Performance: When subjected to the maximum design wind load pressures as defined for this project location by the IBC and State/local building codes and confirmed by tests in accordance with ASTM E330, storefront system shall:
 - a. Limit deflection of framing members to not more than 1/200 or full recovery flexure limit of glazing if less.
 - b. Provide a 50% safety factor on all fasteners attaching system to building structure.
 4. Thermal Performance: Framing systems shall accommodate expansion and contraction movement due to surface temperature differentials of 180 degrees Fahrenheit without causing buckling, stress on glass, failure of joint seals, excessive stress on structural elements, reduction of performance, or other detrimental effects. Doors shall function normally within these temperature differentials.
- B. Manufacturer: Basis of design is Kawneer as the standard of quality and function required for this project. Subject to their ability to provide products conforming with the requirements of this Section and shown on the Drawings,
Other approved manufacturer's include:
1. US Aluminum
 2. Arcadia
 3. Old Castle Building
 4. Other approved substitution.
- C. Materials:
1. Extruded Aluminum: Alloy 6063-T5 conforming to ASTM B221.
 2. Internal Reinforcing: ASTM A36 for carbon steel; or ASTM B308 for structural aluminum, shapes and sizes to suit installation.
 - a. Shop coat steel components after fabrication with alkyd type zinc

chromate primer complying with FS TT-P-645.

3. Fasteners: Stainless steel, type recommended by storefront manufacturer for substrate conditions/materials.
 4. Expansion Anchor Devices: Stainless steel, toothed-steel, drilled-in, expansion bolt anchors.
 5. Shims: Hard plastic, horseshoe shaped, available in different thicknesses as required.
 6. Insulating Glass Units: Provide as specified in Section 08 8000.
 7. Glazing Gaskets: E.P.D.M. elastomeric extrusion conforming to ASTM C509 or C864; profile and hardness as required to maintain uniform pressure for watertight seal, black color.
 8. Glazing: 1 inch sealed insulating glass units specified in Section 08 80 00.
 9. "Anti-Walk" Edge Blocking: "W" shaped EPDM blocks for use in keeping glazing material stationary under vibration or seismic loading.
 10. Baffles (at weep holes): Type as recommended by system manufacturer and shown in published installation instructions.
 11. Internal Sealant: Dow 795 Silicon Sealant or manufacturer's standard.
 12. External Sealant: Dow 795 Silicon Sealant, or manufacturer's standard. Color matching framing.
- D. Aluminum Storefront System: Extruded aluminum framing system complete with all related connections and anchorages. Provide all components required for a complete and functional installation conforming to manufacturer's published performance requirements:
1. Framing Members: Kawneer Tri-Fab II 451 (2" x 4-1/2") Thermal Exterior Glazed system, provide all framing members and accessories required for a complete and functional system that is leak free, in addition to the standard framing members provide the following special members:
 - a. Subsill: assembly continuous in one piece with subsill end closures sealed watertight.
 - b. Head Compensating Channel: assembly continuous in one piece.
 - c. Jamb Filler: rigid vinyl filler continuous in one piece (no joints) installed at back side of all jamb members to allow adequate depth for sealant and rod installation at storefront perimeter.
 - d. Provide stops at door frames, with brush weatherstripping.
- E. Aluminum Doors: Kawneer, *Tuffline500 Series* medium duty entrance doors and frames is the basis of design
1. Side Rails: 5" wide.
 2. Bottom Rail: 9-1/2" wide minimum. Provide concealed weatherstrip.
 3. Top Rail: 6-1/2" wide. Provide concealed weatherstrip.
 4. Provide security astragal on each pair of doors.
- F. Hardware:
1. Weatherstripping:
 - a. Single Acting Offset Pivot or Butt Hung Door and Frame (Single or pairs): Thermoplastic elastomer weathering on a shape with a semi-rigid polymeric backing.
 - b. Equip meeting stiles on pairs of doors with and adjustable astragal utilizing wool pile.

2. Sill Sweep Strips: EPDM blade gasket sweep strip in an aluminum extrusion applied to interior exposed surface of bottom rail with concealed fasteners.
3. Threshold: Extruded aluminum, one-piece per door opening, ribbed surface, maximum 1/2 inch.
4. Hinges: Continuous.
5. Push: See door hardware schedule.
6. See Section 08 71 10 Door Finish Hardware for specific hardware information.

2.02 FABRICATION

- A. Take accurate field measurements to verify required dimensions prior to fabrication.
- B. Fabricate components in accordance with approved shop drawings and manufacturer's fabrication instructions.
 1. Remove burrs and smooth edges.
 2. Shop fabricate to greatest extent practicable to minimize field cutting, splicing and assembly.
 3. Disassemble only to extent necessary for shipping and handling limitations.
- C. Fabricate components true to detail and free from defects impairing appearance, strength or durability.
- D. Fabricate components to allow for accurate and rigid fit of joints and corners. Match components carefully ensuring continuity of line and design. Ensure joints and connections will be flush and weathertight. Ensure slip joints make full, tight contact and are weathertight.
- E. Maintain accurate relation of planes and angles, with hairline fit of contacting members.
- F. Cut, reinforce, drill and tap doors and frames to receive door hardware specified herein and in Section 08 71 00; use concealed fasteners wherever possible.
- G. Reinforce components as required at anchorage and support points, at joints, and at attachment points for interfacing work.
- H. Provide structural reinforcing within framing members where required to maintain rigidity and accommodate design loads.
- I. Install end dams in sill and subsill members to contain water within sill and prevent any leaks into building interior.
- J. Provide weep holes or slots, deflector plates, internal flashings, and sealants to accommodate internal weepage draining water to the exterior and prevent any leaks to building interior.
- K. Provide tight fitting, injection molded, plastic water deflectors at all intermediate

horizontals.

- L. Allow for adequate clearance around perimeter of system to enable proper installation and for thermal movement within system.
- M. Separate dissimilar metals with protective coating or pre-formed separators to prevent contact and corrosion.
- N. Doors: Fabricate with mechanical joints using internal reinforcing plates and shear blocks attached with fasteners and by welding.

2.03 FINISHES

- A. Anodized Finish: Color anodic coating, Architectural Class I, etched, medium matte, 0.7 mil minimum thickness; conform to AA-M12C22A44 and AAMA 608.1.
 - 1. Dark bronze anodized Color as indicated on the Drawings.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.

3.02 EXAMINATION

- A. Verify that openings are ready to receive work and dimensions are as indicated on shop drawings. Do not start installation until openings and conditions are acceptable.
- B. Start of installation indicates installer's acceptance of openings and site conditions.

3.03 INSTALLATION

- A. Install storefront system in accordance with manufacturer's instructions, attach frame securely to building structure as recommended by manufacturer and required to resist dead and live loads.
 - 1. Storefront system shall be installed so as to provide a completely weathertight and leak-free barrier between interior and exterior of building.
- B. Subsills: Seal fasteners and end dams watertight after installing subsill.
- C. Install doors and hardware in accordance with manufacturer's printed instructions.
- D. Align assemblies plumb and level, free of warp or twist, aligning with adjacent Work.
- E. Install fasteners, anchors and shims to permanently fasten framing members

securely to building structure in accordance with storefront manufacturer's attachment instructions and fastener manufacturer's installation instructions.

1. Seal each fastener head/penetration permanently watertight with sealant.
- F. Anchor securely in place, allowing for required movement, including expansion and contraction.
- G. Separate dissimilar materials at contact points, including metal in contact with masonry or concrete surfaces, with protective coating or pre-formed separators to prevent contact and electrolytic action.
- H. Set and seal internal members and connections with internal sealants and baffles as called for in manufacturer's installation instructions.
- I. Glazing: Install glazing, setting blocks, spacer shims, edge blocking and glazing gaskets specified in Section 08 80 00 and this Section in accordance with storefront manufacturer's installation instructions without exception, including surface preparations.
1. Utilize "anti-walk" edge blocking on all vertical edges of glazing.
- J. Installation shall be completely watertight upon completion.
- K. Erection Tolerances:
1. Limit variations from plumb and level:
 - a. 1/8 inch in 10 feet vertically.
 - b. 1/8 inch in 20 feet horizontally.
 2. Limit variations from theoretical locations: 1/4 inch for any member at any location.
 3. Limit offsets in theoretical end-to-end and edge-to-edge alignment: 1/16 inch from flush surfaces not more than 2 inches apart or out-of-flush by more than 1/4 inch.
 4. In no case shall any tolerances listed result in any door touching the frame or not opening/closing properly.

3.04 INSTALLATION – SEALANT TO ADJACENT CONSTRUCTION

- A. Install primary sealant joint sealing exterior side perimeter of window frame to adjacent construction as shown on manufacturer's installation instructions and as specified in Section 07 90 00.
- B. Install secondary sealant joint sealing interior side of window frame perimeter to adjacent construction.

3.05 FIELD QUALITY CONTROL

- A.** Contractor to provide a field spray test performed in accordance with AAMA 502 test to be performed and provided by the contractor. A minimum of 4 windows to be tested.

3.06 ADJUSTING

- A. Test door operating functions. Adjust closing and latching speeds and other hardware in accordance with manufacturer's instructions to ensure smooth operation.

3.07 CLEANING

- A. Remove temporary protection, clean exposed surfaces.

3.08 PROTECTION

- A. Protect completed storefront installation from construction related damage and abuse.

END OF SECTION

SECTION 08 71 00 - FINISH HARDWARE

PART 1 GENERAL

1.1 SECTION INCLUDES

Hardware for swinging, sliding, and folding doors except special types of unique and non-matching hardware specified in other sections.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: Manufacturers with not less than 5 years experience in manufacturing commercial door hardware of the type indicated.
2. Hardware Supplier:
 - a. A recognized architectural finish hardware supplier who has been furnishing hardware in the same state as the project for a period of not less than 5 years.
3. Installer: Company specializing in installing work of this section with not less than 3 years experience and acceptable to the manufacturer and the hardware supplier. The hardware installer shall meet with the representative of the hardware supplier to jointly inventory all hardware items. Upon satisfactory inventory of products, the hardware installer accepts responsibility for all hardware items inventoried.

B. Regulatory Requirements:

1. Provide hardware for openings, whether specified or not, in compliance with NFPA Standard No. 80, IBC 2012 and local building code requirements. Provide only hardware which has been tested and listed by UL or WHI for types and sizes of doors required and complies with requirements of door and door frame labels.
2. Provide hardware which meets or exceeds handicap accessibility per local building code requirements. Conform to the Americans with Disabilities Act (ADA) of 1990.

1.3 SUBMITTALS

A. Under provisions of Section 01340, submit the following:

1. Product information: Manufacturer's published technical product data for all specified door hardware items indicating compliance with the requirements.
2. Hardware Schedule:
 - a. Hardware schedules are intended for the Contractor's coordination of the work. Review and acceptance by the Architect or Owner does not relieve the Contractor of his exclusive responsibility to fulfill the requirements as shown and specified.
 - b. Submit hardware schedule in the manner and format as suggested by the Door and Hardware Institute (DHI) complying with the actual construction progress schedule requirements for each draft.
3. Templates: Hardware supplier will furnish hardware templates to the Contractor for each fabricator of doors, frames, and other work to be shop prepared or factory prepared for the installation of hardware.

4. Warranty: Provide the manufacturer's standard warranty for each product, not to be less than one year after acceptance of the building by the owner. Door closers shall not be warranted for less than ten years.

PART 2 PRODUCTS

2.1 MATERIALS AND FABRICATION

A. General:

1. Provide all door hardware for complete work, in accordance with the drawings and as specified herein.
2. Provide items and quantities not specifically mentioned to ensure a proper and complete operational installation. Match the quality and finish of items specified.
3. Provide miscellaneous hardware as listed in hardware groups.

2.2 HINGES

A. Manufacturer:

1. Listed in Door Hardware Schedule: STANLEY

B. Number of Hinges: Provide number of hinges indicated, but not less than 3 hinges per door leaf for doors 90" or less in height and one additional hinge for each 30" of additional height.

2.3 LOCKSETS, LATCHSETS, PRIVACY SETS AND CYLINDERS:

A. Manufacturer: BEST

B. Lock Throw: Provide 3/4" minimum throw of mortise type latches and deadbolts used. Cylindrical latches will be 1/2" minimum. Comply with UL requirements for throw of bolts and latch bolts on rated fire openings.

C. Contractor to provide construction cores and temporary keying.

2.4 KEYS, KEYING, AND KEY CONTROL

A. Keys: Final keying by Owner

2.5 EXIT DEVICES AND MULLIONS

A. Manufacturer:

1. PRECISION

B. Provide risers, as needed, to prevent interference with door glazing kits.

C. Spacers as needed for proper application of removable mullions on narrow stop type frames shall be an integral part of the frame and supplied by the frame manufacturer.

2.6 CLOSERS:

A. Manufacturer:

1. NORTON

B. Provide parallel arms for all overhead closers, except as otherwise indicated. Provide drop plates as needed to prevent glazing interference.

2.7 OVERHEAD STOPS

- A. Manufacturer:
 - 1. RIXSON
- B. Mount stops to the maximum degree of opening available before conflict with adjacent structures, or, if adjacent structures are not considered, to the maximum allowable by stop manufacturer's template.

2.8 WALL AND FLOOR STOPS

- A. Manufacturers:
 - 1. ROCKWOOD

2.9 GASKETS AND SWEEPS

- A. Manufacturer:
 - 1. PEMKO
- B. General: Except as otherwise indicated, provide continuous weatherstripping at each edge of every exterior door leaf. Provide type, sizes and profiles indicated as drawn or scheduled.

2.10 THRESHOLDS

- A. Manufacturer:
 - 1. PEMKO
- B. Where there is conflict between scheduled thresholds and details, details shall have precedence. Revise details only if necessary to comply with handicap accessibility requirements. Notify the Architect of such required modifications.

2.11 SILENCERS

- A. Manufacturers:
 - 1. ROCKWOOD

2.12 PROTECTION PLATES

- A. Manufacturers:
 - 1. ROCKWOOD
- B. Sizes: Fabricate protection plates (armor, kick or mop) not more than 2" less than door width on stop side and not more than 1" less than door width on pull side, x the height indicated.
- C. Metal Plates: Stainless Steel, 18 gauge (0.050) thick. Satin finish (US32D, 630), bevelled four edges (B4E).

2.13 FINISHES

- A. Exposed surfaces of hardware shall be Brushed Chrome (US26D, 626), unless otherwise indicated.

PART 3 EXECUTION

3.1 INSTALLATION

1. Install each hardware item in compliance with the manufacturer's instructions, requirements of NFPA 80, IBC, ADA, and Washington State Rules and Regulations for Barrier Free Facilities and recommendations of the DHI.
2. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
3. Where not factory machined, machine cut for hardware per template, as required.

3.2 ADJUSTING

- A. Initial Adjustment:
 1. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit.
 2. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.

- B. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

END OF SECTION

SECTION 08 80 00
GLASS AND GLAZING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Flat Glass
- B. Insulating Glass Units
- C. Glazing Accessories

1.03 REFERENCES

- A. All reference shall be the latest adopted edition (except where edition date is specifically noted).
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test
- C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers
- D. ASTM C1036 - Standard Specification for Flat Glass
- E. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass
- F. ASTM C1193 - Standard Guide for Use of Joint Sealants
- G. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass
- H. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror
- I. ASTM E773 - Standard Test Method for Accelerated Weathering of Sealed Insulating Glass Units
- J. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation

- K. IBC – International Building Code, 2018 Edition
- L. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials
- M. GANA (GM) - FGMA Glazing Manual; Glass Association of North America
- N. GANA (SM) - FGMA Sealant Manual; Glass Association of North America

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Provide manufacturer's descriptive literature and performance data on each different type of glass and insulated glass unit specified.
- C. Interior Insulated Glass Unit Samples: None required
- D. Single Glazing Samples: None used

1.05 PERFORMANCE REQUIREMENTS

- A. Glass Thickness: Except where glass thickness is noted, select thickness of exterior glass to withstand dead loads and positive and negative live loads acting normal to plane of glass at design pressures calculated in accordance with requirements in the International Building Code and State/local codes.
 - 1. Limit glass deflection to 1/200 or flexure limit of glass, whichever is less, with full recovery of glazing materials.

1.06 QUALITY ASSURANCE

- A. Perform Work in accordance with "FGMA Glazing Manual" and "FGMA Sealant Manual" for glazing installation methods.
- B. Fabricator, Sealed Insulating Glass Units: Minimum five years documented experience producing sealed insulating glass units specified in this section.
- C. Installer Qualifications: Company specializing in the installation of products specified in this section on projects of similar scope and complexity, with not less than five years of documented experience. Upon request, provided listing of all projects completed within the last 2 years along names and contact information of general contractors and building owner representative for each project.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Do not install glazing when ambient temperature is less than 50 degrees F.
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.08 WARRANTY

- A. Sealed insulating glass units shall be warranted for a period of ten (10) years against seal failure, interpane dusting or misting, and shall include removal of failed unit and replacement with new unit.

PART 2 - PRODUCTS

2.01 FLAT GLASS MATERIALS

- A. Manufacturer
 - 1. Colored/Tinted Glazing: Hartung Glass Industries or PPG Industries.
 - 2. Clear Glazing: Hartung Glass Industries or PPG Industries.
 - 3. Substitutions: See Section 01 60 00, Product Requirements
- B. Clear Uncoated Float Glass:
 - 1. Clear heat-strengthened float glass complying with ASTM C1048, Type I transparent flat, Class 1 (clear), Quality Q3 (glazing select), Kind HS.
 - 2. Performance Values: Minimum 88 percent visible light transmission and a maximum solar heat gain coefficient of 0.82 (based on 1/4" thickness).
- C. Clear Uncoated Heat Tempered Safety Glass: Fully heat tempered with horizontal tempering.
 - 1. Clear tempered float glass complying with ASTM C1048, Type 1 (transparent flat), Class 1 (clear), Quality q3 (glazing select), Kind HT.
 - 2. Fully heat temper glass to comply with CPSC 16 CFR 1201 and ANSI Z97.1 impact safety standards.
 - 3. Permanently etch one corner of each piece of tempered glazing indicating compliance with ANSI Z97.1, locate etch mark so it is visible after installation.
- D. Low-Emissivity Coated Float Glass: None Used
 - 1. Low-E, Argon Filled Solarban 70 Optigray (See Drawings).
 - a. Manufacturer: PPG or Vitro or approved substitution.
- E. Low-Emissivity Coated Heat Tempered Safety Glass: None Used
 - 1. Low-E, Argon Filled Solarban70 Optigray (See Drawings).
 - a. Manufacturer: PPG or Vitro or approved substitution.
- F. Clear tempered float glass complying with ASTM C1048, Type 1 (transparent flat), Class 1 (clear), Quality Q3 (glazing select), Kind HT; with pyrolytic coating meeting the requirements of ASTM C1376.
 - 1. Fully heat temper glass to comply with CPSC 16 CFR 1201 and ANSI Z97.1 impact safety standards.
 - 2. Permanently etch one corner of each piece of tempered glazing indicating compliance with ANSI Z97.1, locate etch mark so it is visible after installation.

- G. Mirror Safety Glass: Fully heat tempered with horizontal tempering. None Used
 - 1. Clear tempered float glass complying with ASTM C 1048, Type 1 (transparent flat), Class 1 (clear), Quality q3 (glazing select), Kind HT.
 - 2. Fully heat temper glass to comply with CPSC 16 CFR 1201 and ANSI Z97.1 impact safety standards.
 - 3. Permanently etch one corner of each piece of tempered glazing indicating compliance with ANSI Z97.1, locate etch mark so it is visible after installation.
 - 4. Warranty: Manufacturer shall warrant silver mirror backing for 10 years against visible deterioration or failure.

2.02 GLAZING ACCESSORIES

- A. Glazing Compound: Silicone sealant single component; chemical curing; capable of water immersion without loss of properties; non-bleeding, non-staining; cured Shore A hardness of 15 to 25; color as selected.
- B. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
- C. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C864 Option I. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.
- D. Glazing Tape: Closed cell polyvinyl chloride foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2 percent, designed for compression of 25 percent to effect an air barrier and vapor retarder seal.
 - 1. Fire Rated Glazing: Glazing tape shall conform to fire listing requirements of the fire rated glazing.
- E. Glazing Gaskets: Specified in Section 08 41 13.

2.03 FABRICATION

- A. Heat-Strengthened Glass: Heat strengthen all glass that is not specified to be fully heat tempered.
 - 1. Cut float glass materials to indicated sizes and provide cut-outs and holes, if indicated, before heat strengthening.
 - 2. Heat strengthen float glass materials in accordance with ASTM C 1048, Kind HS
- B. Heat-Tempered Glass:
 - 1. Cut float glass materials to indicated sizes and provide cut-outs and holes, if indicated, before heat strengthening.
 - 2. Fully temper float glass materials in accordance with ASTM C1048, Kind FT.
 - 3. Comply with CPSC 16 CFR 1201 and ANSI Z97.1.

4. Permanently etch one corner of each piece of tempered glazing indicating compliance with ANSI Z97.1, locate etch mark so it is visible after installation.
- C. Low-Emissivity Coated Glass: Fabricate using methods and equipment recommended by manufacturer; protect coating from damage.
- D. Sealed Insulating Glass Units:
 1. Fabricate units in accordance with ASTM E2190 with components and performance characteristics specified in Schedule paragraph at the end of this Section.
 2. Components:
 - a. Glass Type: As specified in Schedule paragraph at the end of this Section.
 - b. Heat Treatment: As specified in Schedule paragraph at the end of this Section.
 - c. Air Space: Hermetically sealed, dehydrated air filled.
 - d. Performance Characteristics: As specified in Schedule paragraph at the end of this Section.
 3. Provide unit edge seals meeting requirements of ASTM E773, with aluminum spacers having mitered corners, and silicone sealant for glass-to-spacer seals.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate the installation of glazing in steel frames and steel doors with Section 08 11 00.

3.02 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.
- C. Beginning of installation indicates acceptance of openings, substrate and conditions.

3.03 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or

sealer.

- C. Prime surfaces scheduled to receive sealant.

3.04 INSTALLATION – GENERAL

- A. Install glazing in conformance with FGMA Glazing Manual.

3.05 INSTALLATION - INTERIOR STEEL DOORS AND FRAMES - INTERIOR DRY METHOD (TAPE AND TAPE) None Used

- A. Cut glazing tape to length and set against permanent stops straight and true to line, do not project above sight line.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
- C. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.
- D. Place glazing tape on free perimeter of glazing in same manner described above.
- E. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.
- F. Knife trim protruding tape.
- G. Workmanship: Glazing tape shall not extend beyond edge of stop or be installed crooked or wavy; remove and reglaze.

3.06 INSTALLATION - ALUMINUM STOREFRONT

- A. Glazing of aluminum storefront is specified in Section 08 41 13.

3.07 CLEANING

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

3.08 PROTECTION

- A. Protect installed products until completion of project.
- B. Repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 11 00

NON-LOAD BEARING WALL & SOFFIT FRAMING

PART 1 - GENERAL

1.1 REFERENCES

- A. American Society for Testing and Materials (ASTM).
 - 1. C 645 - "Specification for Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board."
 - 2. C 754 - "Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wallboard, Backing Board, or Water-Resistant Backing Board."
- B. American Welding Society (AWS).
 - 1. D1.3 - "Specification for Welding Sheet Steel in Structures."
- C. Metal Lath/Steel Framing Association (MLSFA).
 - 1. "Specification for Metal Lath and Furring."

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All supplied by one manufacturer, U.S. Gypsum Co., Western Metal Lath, Angeles Metal System unless otherwise specified.
- B. Materials shall comply with ASTM C 645.
- C. Metal Studs: 30 mil minimum galvanized steel, non-bearing, with punched webs and perforated flanges to receive screws.
- D. Wide Flange Studs: 54 mil galvanized steel, with punched webs and perforated flanges to receive screws; paint with rust inhibitive primer.
- E. C-Studs: 54 mil galvanized steel, with punched webs and perforated flanges to receive screws.
- F. Runner Tracks: 30 mil galvanized steel, un-punched minimum.
- G. Backing Plates: Steel sheet or plate of gages or thickness required or scheduled, galvanized or painted with rust inhibitive primer.
- H. Channels: 54 mil steel, 3/4 inch furring channels and 1-1/2 inch runner channels, painted.
- I. Metal Furring: Roll formed 18 mil galvanized steel, hat shaped channels.

- J. Fasteners: To suit stud, track, or channel gage.
 - 1. Sheet Metal Screws:
 - a. 3/8 inch Type S pan head for fastening 30 mil material.
 - b. 1/2 inch Type S-16 pan head cadmium plated for fastening wide flange studs to door frame clips, and similar 54 mil material.
 - 2. Powder-Actuated Devices: 1/4 inch diameter with 1-1/2 inch concrete penetration as specified in Section 05500.
 - 3. Concrete Nails: Case hardened stub nails 3/4 inch long.
- K. Wire:
 - 1. 18 gage soft annealed galvanized steel tie wire.
 - 2. 10 gage soft annealed galvanized steel hanger wire.
 - 3. 8 gage soft annealed galvanized steel hanger wire.
- L. Welding Electrodes: AWS low hydrogen type, as required.
- M. Miscellaneous Accessories: Manufacturer's standard, suitable for the intended use.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install Work in accordance with applicable requirements of MLSFA, AWS, and ASTM C 754.
- B. Limit tolerance for bow and alignment to 1/8 inch in 10 feet.
- C. Use wide flange studs at partitions supporting plywood, at electric panels, backing plates, fire extinguisher cabinets, and free ends of partitions.
- D. Use metal studs at interior partition framing supporting gypsum board not requiring wide flange studs.
- E. Use wide flange studs at heads and jambs of door frames and at borrowed light openings. Stiffen as shown.
- F. Furred Spaces: Provide metal furring or furring channels at 16 inch centers vertically or as shown. Fasten at top and bottom, and tie to horizontal furring channels at 4 foot centers. Fasten furring brackets to concrete with powder actuated devices or concrete nails.
- G. Partition Stiffeners: Provide horizontal furring channel stiffeners at 5 foot centers maximum vertically at all metal stud load bearing walls and in non-load bearing walls that have sheathing on one side only.
- H. Provide backing plates as scheduled and detailed, of sufficient length to fasten each end to metal framing. Provide backing plate support for each point of fastening of any unit to be anchored.

- I. Fasten runner tracks at 2 foot intervals and 6 inches from ends.
 - 1. To Concrete Slab: With powder actuated devices or concrete nails.
 - 2. To Steel Framing: By welding.
- J. Secure studs to runner tracks with sheet metal screws to suit stud gage.
- K. Provide welded, bolted, or screwed connections as shown or required.
- L. Partition Bracing: For partitions exceeding 10 feet in length provide two 10 gage wires, one each way perpendicular to plane of partition, at 5 foot centers maximum. Splay at 45 degrees vertically.
- M. Install accessories and miscellaneous specialties to plumb, true, and level lines, including other materials furnished and located as part of the Work of other Sections.
- N. Ceiling Furring:
 - 1. Space hanger wires at 4 feet maximum centers connected to wood framing with 3/8 inch by 3 inch long tie wire screw eyes. Space runner channels at 4 foot centers and saddle tie hanger wire top and bottom with 2 loops secured with no less than 3 turns around itself.
 - 2. Provide hangers within 6 inches of ends of runner channels. Provide runner channels within 6 inches of walls and partitions to support ends of metal furring.
 - 3. Lay out runner channels transverse to direction of joists where spacing permits.
 - 4. Space metal furring for gypsum board at 16 inch centers. Saddle tie to runner channels with 2 loops of tie wire secured with no less than 3 turns around itself.

END OF SECTION

SECTION 09 29 00

GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Interior Gypsum Board (GWB)
- B. Water Resistant Panels (GWB-WR)
- C. Tile Backer Board (TBB)
- D. Finishing Gypsum Board

1.03 REFERENCES

- A. All references shall be the latest adopted edition.
- B. ASTM C475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
- C. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board
- D. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
- E. ASTM C1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
- F. ASTM C1178 - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel
- G. ASTM C1278 - Standard Specification for Fiber-Reinforced Gypsum Panel
- H. ASTM C1280 - Standard Specification for Application of Gypsum Sheathing
- I. ASTM C1396 – Standard Specification for Gypsum Board
- J. ASTM D3273 – Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

- K. GA-214 - Recommended Levels of Gypsum Board Finish; Gypsum Association
- L. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Submit manufacturer's product data for each proposed product sufficient to show compliance with each product specified.
- C. Samples: Submit 6 inch long sample of each different corner metal and trim specified.

1.05 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the work of this section with minimum 5 years of consecutive successful experience.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable codes and installation requirements for fire rated assemblies indicated on drawings.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original and unopened packages, containers, or bundles, with brand names and manufacturer's labels intact and legible.
- B. Store materials in dry location, fully protected from weather and direct exposure to sunlight.
- C. Stack gypsum board products flat and level, properly supported to prevent sagging or damage to ends and edges.
- D. Store corner bead and other metal and plastic accessories to prevent bending, sagging, distortion, or other mechanical damage.

1.08 PROJECT CONDITIONS

- A. Environmental Conditions: Establish and maintain environmental conditions for applying and finishing gypsum board to comply with ASTM C840 requirements or gypsum board manufacturer's recommendations, whichever are more stringent.
- B. Ventilation: Provide controlled ventilation during joint finishing operations, to eliminate excessive moisture. Avoid drafts during hot, dry weather to prevent finishing materials from drying too quickly.

PART 2 - PRODUCTS

2.01 GYPSUM BOARD MATERIALS (GWB)

- A. Interior Gypsum Board (GWB): ASTM C1396; Type X, fire rated, UL or WH tested and listed; sizes to minimize joints in place; ends square cut.
 - 1. Thickness: 5/8 inch.
 - 2. Edges: Tapered.
 - 3. Length: Longest lengths possible for least number of butt joints.
 - 4. Radius/Curved Walls: Use any thickness gypsum board that will bend to the required radius.
 - a. Single Layer Minimum Thickness: 5/8-inch.
 - b. 1/4-inch thick board requires 3 layers.
 - c. 3/8-inch thick board requires 2 layers.

- B. Water Resistant Panels (GWB-WR):
 - 1. Manufacturer/Product: USG *Fiberock Brand Aqua-Tough Interior Panels* or approved.
 - 2. Thickness: 5/8-inch
 - 3. Edges: Tapered
 - 4. Size: Largest size practicable to minimize joints in place.
 - 5. Ends: Square cut
 - 6. Standards: Conform to ASTM C1278 and physical property requirements of ASTM C1396 and C1178.

- C. Tile Backer Board (TBB):
 - 1. Manufacturer/Product: G-P Gypsum *DensShield Tile Backer* or approved.
 - 2. Thickness: 5/8"
 - 3. Edges: Tapered
 - 4. Size: Largest size practicable to minimize joints in place.
 - 5. Ends: Square cut
 - 6. Standards: Conform to ASTM C1278 and physical property requirements of ASTM C630 and C1178.

2.02 ACCESSORIES

- A. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board; USG *Sheetrock Acoustical Sealant* or similar.

- B. Outside Square Corners: Galvanized metal corner bead factory clad with paper tape; Beadex *Microbead* or approved.

- C. Angled Corners: Beadex *B1 Flex 100' Tape-On Flexible Corner Bead*, or approved.

- D. J-Mold (Where GWB Abuts Dissimilar Material And Is Exposed To View): Galvanized metal J-shaped trim factory clad with paper; Beadex *B9J Tape-On "J" Trim* or approved.

1. GWB Abuts Windows: Provide temporary heavy weight cardboard strip 3 inches wide between trim and face of window frame to protect frame from dirt and damage.

- E. Control Joint: GA 216; roll-formed metal control joint with removable strip, similar to USG No. 93, or approved.

- F. Joint Materials: Provide products by manufacturer of gypsum board. Conform to ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
 1. Interior Applications: Ready-mixed vinyl-based joint compound
 - a. Taping Compound: Type specifically formulated for embedding tape and accessories and for pre-filling.
 - b. Topping Compound: Type specifically formulated for finishing drywall over taping compound.
 - c. Joint Tape: Manufacturer's standard paper reinforcing tape.
 2. Water Resistant Panels: *Sheetrock Brand Durabond Setting-Type Joint Compound* or *Sheetrock Brand Easy Sand Joint Compound* manufactured by U.S. Gypsum.
 - a. Joint Tape: Paper tape, *Sheetrock Brand Joint Tape* manufactured by U.S. Gypsum
 3. Tile Backer Board (With Tile Finish):
 - a. Joint and Taping Compound (Thin Set Cement Mortar): Specified in Section 09 30 00.
 - b. Joint Tape (Glass Fiber Mesh): Specified in Section 09 30 00.

- G. Primer/Surfacer: *Sheetrock Brand Primer-Surfacer Tuff-Hide* manufactured by U.S. Gypsum.

- H. Acoustical Insulation: Owens-Corning, *Noise Barrier Batts*, ASTM C 665, 3 1/2" thick.

- I. Screws:
 1. Interior Application: Conform to ASTM C1002; bugle-head steel, self-drilling type, black phosphate finish.
 2. Exterior Application and Tile Backer Board: Conform to ASTM C1002; bugle-head steel, self-drilling type, provide with yellow zinc corrosion resistant coating.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.

- B. Coordinate location of framing and backing for supporting ends of GWB and control joints with Section 06 10 00.

- C. Inspect finished surfaces with Section 09 90 00 painting applicator and project

superintendent, mark areas that require additional finishing.

3.02 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.
- B. Confirm that the framing is straight, is within specified tolerances and meets minimum allowable deflection requirements.
- C. Confirm that utility rough-in fits properly within framing width and will not prevent GWB from fitting tight to face of framing members.
- D. Confirm that there is adequate temporary heat and light.
- E. Beginning of installation indicates acceptance of framing and conditions.

3.03 FLOOR PROTECTION

- A. Protect concrete floors from contact with GWB dust, taping mud and primer/surfacer using heavy paper or other method.

3.04 GYPSUM BOARD INSTALLATION

- A. Install GWB in conformance with ASTM C840, C1280, GA-216, and manufacturer's installation instructions.
 - 1. Install in longest lengths possible for minimum number of joints.
 - 2. Install to minimize butt end joints, especially in highly visible locations.
 - 3. Comply with the installation requirements of fire rated assemblies listed on the Drawings.
 - 4. Water Resistant Panels: Use stainless steel screws.
 - 5. Tile Backer Board: Use corrosion resistant screws, locate cut edges at top of walls only, screw spacing as recommended by manufacturer.
 - 6. Install shaftwall in conformance with manufacturer's installation instructions and fire listing requirements.
 - 7. Exterior Gypsum (GWB) Sheathing Board: Use corrosive resistant screws. Fit joints tight as recommended by manufacturer.
- B. Install full width panels with cut pieces only at top of wall (no "belly bands").
- C. Place wrapped edges adjacent to one another; do not place cut edges or butt ends adjacent to wrapped edges.
- D. Maintain 1/4 inch maximum gap between bottom of gypsum board and floor.
- E. Double-Layer Installation: Use gypsum backing board for first layer, placed perpendicular to framing or furring members. Place second layer parallel to first layer. Offset joints of second layer from joints of first layer.
- F. Acoustic Sealant: Install at perimeter of all sound walls in accordance with manufacturer's instructions and as follows:

1. Place continuous bead at perimeter of each layer of gypsum board.
 2. Seal around all penetrations by conduit, pipe, ducts, rough-in boxes, and at other similar penetrations.
- G. Run gypsum board full depth behind steel door and reight frames.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Corner Beads: Install at external corners in a single full length piece free of butt joints, using longest practical lengths, no short pieces; place into a solid bed of soft joint compound for secure installation.
1. Align bead straight and plumb.
 2. Align juncture with other corner bead flush.
- B. J-Shaped Edge Trim: Install at any exposed to view location where gypsum board abuts any dissimilar material or ends with exposed edge (around window frames, exposed structure, etc.).
1. Install heavy cardboard continuous at window perimeter to protect frame from dirt and damage.
- C. Control Joints: Place control joints consistent with lines of building spaces and as follows:
1. As determined by installer to avoid cracking in finished surfaces, generally not more than 30 feet apart on walls and ceilings over 50 feet long. Location and layout subject to Architect's approval; review with Architect prior to starting installation.

3.06 JOINT TREATMENT

- A. Finish gypsum board (whether exposed to view or not) in accordance with GA-214 to the following minimum level of finish:
1. Painted Finish Exposed To View: Level 4, substitute a coat of Primer/Surfacer (15 – 20 wet mil thickness) in lieu of skim coating with joint compound; sand surface of Primer-Surfacer smooth.
 2. Surfaces in Mechanical/Electrical and Storage Rooms: Level 4.
 3. Concealed from View with Thick Adhered Surface Finish (sheet vinyl or rubber base, plastic sheet wainscot, etc.): Level 3.
 4. Concealed from View without Surface Finish Above Suspended Lay-In Ceilings: Level 1.
 5. Concealed from View with Tile Finish: Joint treatment specified in Section 09 30 00.
 6. Water Resistant Panels: Level 5, substitute a coat of Primer/Surfacer (15 – 20 wet mil thickness) in lieu of skim coating with joint compound; sand surface of Primer-Surfacer smooth.
 7. Exterior Gypsum Sheathing Board: No finish when joints are butted tight except as required to achieve required fire rating in accordance with fire test/listing.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
1. Feather coats of joint compound so that camber is maximum 1/32 inch.

3.07 APPLICATION – PRIMER/SURFACER

- A. Apply Primer/Surfacer to all surfaces exposed to view in accordance with manufacturer's installation instructions and at recommended application rate to achieve GA-214 Level 4 appearance, free of visible tape joint lines after finish painting is completed.
 - 1. Spray-apply Primer/Surfacer to 15 - 20 mil wet film thickness applied in two separate passes at 90 degrees to each other for proper coverage.
 - 2. Sand surface of Primer/Sealer lightly after it has dried to eliminate any unwanted stipple pattern or texture.
- B. After application of Primer/Sealer, carefully inspect walls and mark any defects in surface finish.
 - 1. Fill/sand defective areas in surface finish and recoat with primer/surfacer.

3.08 INSPECTION WITH PAINTER AND PROJECT SUPERINTENDENT

- A. Coordinate an inspection walkthrough of all finished GWB surfaces with the painter and project superintendent; mark any defects in the surface finish.
 - 1. Fill/sand defective areas in surface finish and recoat with primer/surfacer.

3.09 TOLERANCES

- A. Gap Between Bottom Of GWB and Floor: 1/4 inch Maximum.
- B. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.
- C. Butt Joint Finishing: Not readily visible under the normal lighting conditions found for any given area/surface.
- D. Finishing Tolerances: All exposed surfaces shall be smooth and free from visible ridges, waves, ripples, holes, defects, delamination, roughness, depressions, screw pops, etc. Taped joints shall not be visible after finish paint application.
- E. Final texture: Final texture should be light "orange peel" to match as closely as possible to existing adjacent.

3.10 CLEAN UP

- A. Remove all excess gypsum board and finishing materials from the site.
- B. Remove gypsum board scraps and dust from all concealed spaces including interior spaces of wall framing.

- C. Remove gypsum dust, taping mud and primer/sealer completely from window frames, door frames, subfloor surfaces and any surface/material exposed to view.
 - 1. Subfloor cleanliness/condition shall conform to floor covering installation requirements.

3.11 WORKMANSHIP

- A. Gypsum wallboard shall be installed and finished using the best workmanship, including the following:
 - 1. No damaged board or paper face.
 - 2. Ends centered on framing.
 - 3. GWB tucked full depth behind hollow metal door frames.
 - 4. Gap at bottom of GWB 1/4 inch or less.
 - 5. Cut-outs for outlets and devices cut neatly with saw or router.
 - 6. GWB fastened tight to face of studs to eliminate screw pops.
 - 7. Acoustic sealant consistently applied to all openings and perimeters.
 - 8. All screws that do not engage framing removed.
 - 9. Taped joints full bedded in taping compound and free of air pockets.
 - 10. Butt joints finished with minimal thickness and tapered out for flat appearance.
 - 11. Taped joints smooth and flat so as to disappear after painting.
 - 12. Paper face not roughened by sanding.
 - 13. Bottom of GWB behind rubber base and coved base properly finish smooth and free of roughness.
- B. Gypsum wallboard installed and finished with improper or poor workmanship shall be removed and replaced at Contractor's expense.

3.12 FIELD QUALITY CONTROL

- A. Contractor Quality Control: Employ/assign quality control personnel to monitor the work of this section for conformance to the requirements of this section and to good construction practices.
 - 1. Contractor is solely responsible for managing and controlling the quality of the work and conformance with the requirements of this Section.
- B. Schedule of Required Inspections by Contractor; confirm installation and workmanship are as shown/specified:
 - 1. Inspect framing for conformance to specified surface tolerances.
 - 2. Confirm that batt insulation and sound insulation are installed in the proper locations and conform to specification requirements.
 - 3. Inspect GWB installation.
 - 4. Inspect trim installation.

5. Inspect taping and finish application.
6. Inspect finish on bottom of walls with rubber base and covered base.
7. Inspect finished GWB surfaces after primer is applied with painter and GWB finisher to identify any finishing defects requiring correction prior to painting.

END OF SECTION

SECTION 09 30 00

TILE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Ceramic tile at floors and walls.

1.03 REFERENCES

- A. All references shall be the latest adopted edition except as noted.
- B. ANSI/TCA A108.6 - Ceramic Tile Installed with Chemical Resistant, Water Cleanable Tile-Setting and Grouting Epoxy.
- C. ANSI/TCA A118.3 - Chemical Resistant, Water Cleanable Tile-Setting and Grouting Epoxy.
- D. ANSI/TCA A118.4 - Latex-Portland Cement Mortar.
- E. ANSI/TCA A137.1 - Specifications for Ceramic Tile.
- F. TCA (Tile Council of America) - Handbook for Ceramic Tile Installation.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Submit manufacturer's product data for each different material specified.

1.05 QUALITY ASSURANCE

- A. Conform to ANSI/TCA A137.1
- B. Conform to TCA Handbook for Ceramic Tile Installation.
- C. Conform to manufacturer's installation instruction.

1.06 QUALIFICATIONS

- A. Manufacturer: Company specializing in the manufacture of products specified in this Section with minimum ten (10) years documented experience.

- B. Tile Installer: Company specializing in applying the work of this Section with minimum five (5) years documented experience and approved by product manufacturer.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and protect products as recommended by the manufacturer.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Maintain 50 degrees F. minimum during installation of mortar materials.

1.09 GUARANTY / WARRANTY

- A. 1 Year Contractor Guaranty: The Contractor shall guaranty the tile installation for a period of one (1) year against defects in installed materials and workmanship, deterioration and leaks including a 1 year watertight guaranty on waterproof membrane installation. Correct any tile work that is defective, improperly installed or leaking for a period of 1 year at no cost to the Owner.
- B. Manufacturer's Warranty: Provide tile installation systems manufacturer's standard 10 year guarantee that the tile installation systems will be free from manufacturing defects and will not break down or deteriorate under normal usage for period of 10 years.

PART 2 - PRODUCTS

2.01 TILE

- A. See Drawings for Tile Manufacturers, patterns, colors and sizes.
- B. Provide wall tile, coved base, bullnose cap, bullnose outside corners, coved inside corners, wall borders, caps, stretchers, round in corners, round out corners, and other shapes required for complete installation.

2.02 TILE BACKER BOARD

- A. GWB Tile Backer Board: Installation specified in Section 09 29 00; joint treatment specified herein.
 - 1. Joint Bonding Material: Mortar Bond Coat Materials (Thinset) specified in this Section.
 - a. Joint Tape: 2 inch wide, polymer-coated alkali-resistant 10 x 10 glass fiber mesh tape, self-adhesive; approved by thinset mortar manufacturer.

2.03 SETTING/INSTALLATION SYSTEMS (MORTAR, GROUT, WATERPROOFING AND ANTI-FRACTURE MEMBRANES)

- A. General Requirements:
1. Manufacturer/Product Selection: Mortar, grout, waterproofing and anti-fracture membrane products installed shall be manufactured by a single manufacturer selected from any of those listed below (mixing different manufacturer's products is not allowed).
 2. 10 Year Warranty: Installed products are subject to a ten (10) year warranty by the manufacturer; refer to warranty paragraph in Part 1 of this specification.
- B. Mortar Bond Coat Materials (Thinset): To be used both under and over uncoupling, crack-isolation membrane. Select from the following manufacturer's products meeting ANSI A118.11 or ANSI A118.15: Select any of the following manufacturer's products:
1. Custom Building Products *Prolite Tile & Stone Mortar, MegaFlex or MegaLite Crack Prevention Mortar.*
 2. Laticrete *255 MultiMax or 254 Platinum.*
 3. Mapei *Kerabond+Keralastic* (floors and walls) or *Ultracontact* (floors only).
 4. Ardex Americas; Ardex x65 Lite
- C. Grout: Epoxy grout as per manufacturer's systems.
1. Custom Building Products *100% Solids Epoxy Grout*, combined with *Polyblend Sanded Grout*, antimicrobial, with lifetime warranty; or equal products manufactured by Laticrete Spectralock Pro Premium Grout, Mapei Kerabond+Keralastic Ultraflex RS or Ardex Americas Ardex WA.
 2. Refer to Drawings.
- D. Waterproof Membrane: Select any of the following manufacturer's products:
1. Custom Building Products *RedGard Waterproofing & Crack Prevention Membrane* with manufacturer's recommended reinforcing fabric (including pre-moulded inside and outside corners) at all changes of plane.
 2. Laticrete *9235 Waterproofing Membrane* with manufacturer's recommended reinforcing fabric (including pre-moulded inside and outside corners) at all changes of plane.
 3. Mapei *Mapelastc HPG* with manufacturer's recommended reinforcing fabric (including pre-moulded inside and outside corners) at all changes of plane.
- E. Anti-Fracture Membrane: Select any of the following manufacturer's products:
1. Custom Building Products *Crack Buster Pro Crack Prevention Mat Underlayment*, width as recommended by manufacturer for size of tile; provide manufacturer's recommended primer.
 2. Laticrete *Blue 92 Anti-Fracture Membrane*, width as recommended by manufacturer for size of tile.
 3. Mapei *Mapelastc SM*, width as recommended by manufacturer for size of tile.
 4. Ardex Americas- Flexbone.

2.04 ACCESSORIES

- A. Provide fillers, admixtures, and adhesives as required to suit conditions for complete installation.
- B. Sealant: High performance, single component neutral cure silicone sealant; in color matching grout joint; provide backer rod and bond breaker tape of type recommended by sealant manufacturer.
 - 1. Manufacturer/Products: Laticrete *Latasil* or equal.
 - a. Primer: Laticrete *9118 Primer*
- C. Sealer:
 - 1. Porcelain Tile & Joint Sealer: Miracle Sealants Company *511 Porous Plus*.
- D. GWB Tile Backer Board: Specified in Section 09 29 00.
- E. Metal Trim/Edge Strips At Thinset Tile: Provide metal trim made to fit flooring conditions:
 - 1. Thinset Tile to Carpet/Walk-Off Mat Transitions: Schluter Systems *Reno-TK* satin anodized aluminum edge trim, select height to match tile and carpet thickness.
 - 2. Thinset Tile to Resilient Flooring Transitions: Schluter Systems *Schiene* satin anodized aluminum edge trim, height to match tile thickness.
 - 3. Thinset Tile to Concrete Floor Transitions: Schluter Systems *Reno-Ramp* satin anodized aluminum edge trim, height to match tile thickness.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate installation to follow dry out of building and completion of GWB.

3.02 EXAMINATION

- A. Inspect substrate surfaces and site conditions and verify that they conform to manufacturer's requirements and are acceptable to receive work.
- B. Inspect tile backer board installed by Section 09 29 00.
- C. Identify any unacceptable cracks requiring filling or repair.
- D. Confirm that subfloor surface tolerances are within 1/4 inch in 10 feet and 1/16 inch in 1 foot per TCA recommendations. (Sand – Grid as required to achieve)
- E. Measure spaces/rooms for square and parallel walls.

- F. Confirm that substrates are not contaminated with any material/substance that would impair the adhesion of the tile to the substrate.
- G. Do not proceed with installation until substrate surfaces and site conditions conform to all requirements.
- H. Beginning of installation indicates installer accepts substrate surfaces and site conditions as conforming to all requirements.

3.03 PREPARATION

- A. Prepare substrate surfaces and conditions for application as required by manufacturer of thinset bond coat and waterproofing membrane.
- B. Subfloor Cracks:
 - 1. Install anti-fracture membrane over cracks in subfloor in accordance with manufacturer's installation instructions.
 - 2. Seal substrate surface cracks with filler as recommended by waterproofing membrane manufacturer.
- C. Thoroughly remove any substances on substrate surfaces that would negatively affect the installation or bond strength of the waterproofing membrane or tile.
- D. Protect surrounding work from damage or disfiguration.
- E. Vacuum clean existing surfaces and damp clean.

3.04 GWB TILE BACKER BOARD – JOINT TREATMENT

- A. GWB Tile Backer Board Installation: Specified in Section 09 29 00.
- B. Joint Treatment: Install fiberglass mesh Joint Tape and Thinset Mortar Bond Coat Material over all joints in GWB Tile Backer Board in accordance with backer board manufacturer's installation instructions.
 - 1. Allow thinset to cure fully before proceeding with tile application.

3.05 INSTALLATION – WATERPROOF MEMBRANE

- A. Install liquid applied waterproofing membrane in accordance with manufacturer's published installation instructions to achieve a completely waterproof installation.
 - 1. Install 2 separate coats minimum at application rate and thickness recommended by manufacturer of waterproof membrane application.
 - 2. Install fiberglass mesh at substrate cracks, corners, drains, changes of plane, floor/wall junctures and elsewhere recommended by manufacturer.
- B. Apply and detail waterproofing carefully to assure uniform thickness and application of liquid waterproofing and complete saturation of mesh.
- C. Inspect completed waterproofing carefully for bubbles, pinholes, voids, thin spots or other defects and repair/seal with additional coats of liquid waterproofing.

- D. Protect membrane from traffic and damage prior to installation of tile.

3.06 MIXING – THINSET MORTAR & GROUT

- A. Mix thinset mortar and grout in strict conformance with manufacturer's mixing instructions using specified products.
 - 1. Machine Mixing: Mixer shall be a rotating blade mortar mixer. Do not over mix. Stop mixer and dump mortar from mixer promptly.
 - 2. Hand Mixing: Pre-mix the dry ingredients (sand and cement). Place liquid in clean container or mixing box, add dry materials and mix. Adjust amount of liquid or dry material to obtain proper consistency.

3.07 TILE LAYOUT AND CUTTING

- A. Tile Layout:
 - 1. General: Avoid narrow cuts and small pieces, consult with Architect to determine best resolution before proceeding with cutting and installation.
 - 2. Floors: Lay out tile in each room for equal borders and uniform appearance; if layout results in tile cuts less than $\frac{1}{2}$ the tile width, consult with Architect and adjust layout as directed.
 - 3. Walls: Lay out tile to avoid cutting tile horizontally; vertical cuts shall be at inside corners. When size of wall and floor tile match, align joints.
 - 4. Base: Align joints with joints in floor tile, place cut pieces at inside corners.
 - 5. Doors: Stop tile at centerline of door.
- B. Cut tile to fit the spaces/rooms and configuration shown.
 - 1. Cuts shall be accurate and align from tile to tile in a uniform line.
 - 2. Cuts shall allow for joint width matching width of field tile.
- C. Cut and fit tile to penetrations through tile, form corners and bases neatly.

3.08 INSTALLATION – GENERAL

- A. Install tile and grout in accordance with applicable requirements of ANSI A108.1 through A108.10, manufacturer's instructions, and TCA Handbook recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Place metal trim/edge strips at exposed tile edges.
- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
- E. Set tile firmly in place fully bonded to setting bed and with top surface flush with adjacent tile; align tile square and with straight parallel grout lines of uniform width.
 - 1. Lippage of tile edges is not acceptable.

- F. Form internal angles coved and external angles bullnosed, or as shown on Drawings.
- G. Joint Patterns: Lay out tile according to patterns indicated on Drawings, or if not shown, in a grid pattern with floor joints aligning with wall and trim joints. Install joints straight and of uniform width.
- H. Install tile under or behind equipment or fixtures.
- I. Sound tile after setting. Replace hollow sounding units.
- J. Keep control joints free of mortar or grout. Apply sealant to joints.
- K. Allow tile to set for a minimum of 48 hours prior to grouting.
- L. Grout tile joints working grout completely into full depth of joints.
 - 1. Cushioned Edge Tile: Wipe mortar out of joint to near bottom of rolled edge (do not expose vertical edge of tile).
- M. Clean excess grout from exposed tile surfaces.
- N. Include sealant-filled joint at floor perimeters and wall inside corners and where system abuts different material and substrates.
 - 1. Sealant color shall match grout.
 - 2. Provide backer rod or bond breaker tape compatible with sealant.
 - 3. Install backer rod or bond breaker and sealant in accordance with manufacturer's installation instructions.
- O. Apply sealant-filled joints at junction of tile and dissimilar materials, at junction of dissimilar planes and wherever else required to prevent cracks. Match grout color.

3.09 TILE INSTALLATION - THINSET METHOD

- A. Install thinset mortar and tile to properly prepared and clean substrate in accordance with manufacturer's installation instructions and ANSI/TCA A108.5.
- B. Mortar shall be applied with notched trowel using scraping motion to work the material into good contact with the surface to be covered.
 - 1. Trowel notches shall conform to size/spacing recommended by thinset mortar manufacturer.
- C. Only as much thinset mortar shall be applied as can be covered within 20 to 30 minutes, or is still tacky. Tile shall be aligned to show uniform joints and then allowed to set firm.
- D. Back-butter large tile with thinset mortar to assure full coverage and bond over entire tile surface.

- E. Set tile into thinset mortar firmly to remove voids and air pockets and with top surface flush with adjacent tile; align tile square and with straight parallel grout lines of uniform width.
 - 1. Lippage of tile edges is not acceptable.
- F. Excess mortar shall be cleaned from the surface of the tile with a wet cloth or sponge while the mortar is fresh.
- G. Refer to drawing for tile patterns, do not interrupt tile pattern through openings.
- H. Place edge strips at exposed tile edges or transition from ceramic tile to other finish floor materials.
- I. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight without voids, cracks, excess mortar, or excess grout.
- J. Sound tile after setting; replace hollow sounding units.
- K. Keep expansion and control joints free of mortar or grout. Apply sealant to joints.
- L. Allow tile to set for a minimum of 48 hours prior to grouting.
- M. Grout tile joints working grout completely into full depth of joints.
 - 1. Cushioned Edge Tile: Wipe mortar out of joint to near bottom of rolled edge (do not expose vertical edge of tile).
- N. Clean excess grout from exposed tile surfaces.
- O. Include sealant-filled joint at floor perimeters and wall inside corners and where system abuts different material and substrates.
 - 1. Sealant color shall match grout.
 - 2. Provide backer rod or bond breaker tape compatible with sealant.
 - 3. Install backer rod or bond breaker and sealant in accordance with manufacturer's installation instructions.

3.10 INSTALLATION SCHEDULE

- A. General: All tile work shall be performed in conformance with installation methods outlined in the Tile Council of America (TCA) *Handbook For Ceramic Tile Installation* as follows:
- B. Floor Setting Method– Floor Tile Over Concrete Slab: Thin-set application per **TCA Installation Method F115**, using thin-set mortar bond coat over concrete slab.
 - 1. Grout: Epoxy Grout verify color during submittal process. Select from manufacturer's standard colors.
- C. Wall Setting Method - Wall Tile Over GWB Tile Backer Board: Thin-set application per **TCA Installation Method W245** using thin-set mortar bond coat over GWB tile backer board.

1. Grout: Epoxy Grout, verify color during submittal process. Select from manufacturer's standard colors.
- D. Expansion Joints (Vertical & Horizontal): Install sealant filled joints per TCA Installation Method EJ171 at perimeter of floors and inside corners of walls, and where shown on Drawings; match sealant color to grout color.

3.11 TILE PATTERNS

- A. Refer to drawings for pattern types and/or blends.

3.12 CLEANING

- A. Clean tile surfaces, remove all grout haze and dirt.

3.13 SEALER

- A. After tile floors have been thoroughly cleaned, and grouted seal entire surface per grout manufacturers instructions/directions with sealer as recommended by manufacturer.
- B. Allow sufficient time for grout to cure prior to sealing as recommended per manufacturer.

3.14 PROTECTION

- A. Protect finished installation from damage.
- B. Do not permit traffic over finished floor surface.

END OF SECTION

SECTION 09 65 00
RESILIENT FLOORING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Resilient Base (VRB)
- B. Welded Seam Sheet Goods
- C. Luxury Vinyl Tile (LVT)

1.03 REFERENCES

- A. ASTM - Standard Specification for Vinyl Sheet goods
- B. ASTM - Standard Specification for Resilient Wall Base
- C. ASTM – Standard Specification for Luxury Vinyl Tile

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Submit manufacturer's product data sheet for each of the following (subject to Owner approval during submittal review):
 - 1. Resilient Base
 - 2. Vinyl Sheet Goods
 - 3. Luxury Vinyl Tile
 - 4. Adhesives for each different flooring product and accessory
 - 5. Cleaning Products
- C. Samples: Submit 2 color samples of each color selected for each item specified.

1.05 DELIVERY, STORAGE AND PROTECTION

- A. Protect materials from damage. Store materials in accordance with manufacturer's instructions.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

- B. Maintain building temperature at 65 degrees F for 2 weeks minimum prior to installation.
- C. Store materials for not less than 48 hours prior to installation in area of installation at a temperature above 65 degrees F to achieve temperature stability. After flooring has been installed, maintain conditions above 60 degrees F.

1.07 EXTRA MATERIALS

- A. For each color/pattern of floor material, provide 16 SF for Owner's maintenance use.

PART 2 - PRODUCTS

2.01 GENERAL

- A. For substitutions, see Section 01 60 00, Product Requirements.

2.02 RESILIENT BASE, SHEET GOODS AND LUXURY VINYL TILE

- A. Resilient Base to be Roppe, 4 inch or approved equivalent
- B. Sheet Goods to be Shaw Vitality Tones 4375V or approved equivalent
- C. Luxury Vinyl Tile to be Mannington Commercial Access Collection or approved equivalent.

2.03 ACCESSORIES

- A. Subfloor Filler: Cementitious latex type not adversely affected by moisture or alkali as recommended by flooring and adhesive materials manufacturer for application to concrete slab on grade; the following manufacturers/products are acceptable:
 - 1. Ardex *V1200*
 - 2. Mapei *PRP110*
- B. Adhesives and Sealants: Use ONLY premium (best) quality low VOC adhesives and sealants approved by flooring/base/accessory manufacturer and Owner for each different type of flooring and substrate.
- C. Primers: Low VOC primer recommended by flooring manufacturer for each different floor substrate and condition.
- D. Transition/Reducer Strips: Rubber in color matching rubber base, profile required to accommodate flooring and condition, Johnsonite or approved.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.

- B. Coordinate concrete floor finish and curing/drying requirements with Sections 03 30 01 and 03 30 02.
- C. Schedule flooring installation to follow drying of concrete floor slab and completion of interior painting.

3.02 EXAMINATION

- A. Verify that concrete sub-floor surfaces are ready for resilient flooring installation and within the limits recommended by resilient flooring manufacturer and adhesive materials manufacturer by testing the moisture emission rate, alkalinity and any other tests in manner recommended by manufacturers.
- B. Verify that sub-floor surfaces are flat within tolerances specified in Section 03 30 01 using a 10 foot long straight edge.
- C. Examine sub-floors prior to installation to determine that surfaces are smooth and free from cracks, holes, ridges, and other defects that might prevent adhesive bond or impair durability or appearance of the flooring material.
- D. Verify that wall surfaces are smooth and flat within tolerances specified in Section 09 29 00; are free of voids, openings or gaps; are dust-free, and are ready to receive resilient base.
- E. Inspect sub-floors prior to installation to determine that surfaces are free from curing, sealing, parting and hardening compounds; residual adhesives; adhesive removers; oil, grease and other foreign materials that might prevent adhesive bond.
 - 1. Visually inspect for evidence of moisture, alkaline salts, carbonation, dusting, mold, or mildew.
- F. Verify that sub-floor surfaces are free of all construction dirt, gypsum dust, taping mud, paint, sand, etc.
- G. Verify that required floor-mounted utilities (drains, electrical outlets, etc.) are in correct location and installed to proper height to flush out with flooring material.
- H. Report conditions contrary to contract requirements that would prevent a proper installation. Do not start installation until substrate/sub-floor meets requirements of material and adhesive manufacturers.
- I. Failure to call attention to defects or imperfections will be construed as acceptance and approval of the sub-floor. Beginning of installation indicates acceptance of substrate/sub-floor and conditions as conforming to all requirements.

3.03 PREPARATION

- A. Sub-floor surface shall be smooth and free of waviness, ridges, bumps, depression or other irregularities that will be visible after resilient flooring is laid.

1. After demolition of existing flooring, remove all adhesives and other materials sufficiently to meet manufacturers specs for installation.
 2. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
- B. Prohibit traffic until filler is cured.
- C. Vacuum clean substrate thoroughly; sand and dirt particles trapped under floor tile will require replacement of flooring.
- D. Apply primer if recommended by flooring material or adhesive manufacturers for product or substrate/subfloor conditions.

3.05 INSTALLATION – RESILIENT BASE

- A. Install base in accordance with manufacturer's installation instructions to properly prepared substrate.
- B. Install base in continuous, unbroken lengths with joints at inside corners only.
- C. Miter or cope internal corners for tight, hairline joint; at external corners, "V" cut back of base strip to 2/3 of its thickness and fold.
- D. Tightly bond base to vertical substrate with continuous contact at horizontal and vertical surfaces
1. Top of base shall fit tight to wall, free of open crack or lack of adhesion.
- E. Scribe and fit to door frames and other interruptions.
- F. Install base on casework toe spaces and exposed ends.
- G. Install base behind removable casework, equipment or any other non-permanent item.

3.05.1 INSATLLATION OF SHEET GOODS

- A. As per manufacturers recommendations

3.05.2 INSTALATION OF LUXURY VINYL TILE

- A. As per manufacturers recommendations

3.06 PROTECTION OF FINISHED WORK

- H. Prohibit traffic on resilient flooring for 48 hours after installation.
- I. Protect flooring from any marring or damage resulting from construction operations.

3.07 CLEANING AND SEALING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Vinyl Composition Tile Flooring: Strip, clean, and seal flooring products in accordance with manufacturer's instructions.
 - 1. Thoroughly strip and clean flooring with cold water stripper.
 - 2. Seal with 2 coats of flooring manufacturer's recommended (semi-gloss) sealer/finish.
- C. Cleaned and sealed flooring shall have consistent appearance and sheen, and be free of trapped dirt, stains, scuff marks, scratches or discoloration.

END OF SECTION

SECTION 09 75 10

SOLID SURFACE COUNTERTOPS

PART 1- GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Solid surface countertops.
 - 2. Setting materials and accessories.

1.2 SUBMITTALS

- A. Shop Drawings: Include countertop layout, dimensions, materials, finishes, cutouts, and attachments.
- B. Samples:
 - 1. 3 x 3 inch samples in showing available colors.
 - 2. 3 inch long joint sealer samples showing available colors.

1.3 QUALITY ASSURANCE

- A. Fabricator and Installer Qualifications: Minimum 2 years documented experience in work of this Section.

1.4 WARRANTY

- A. Provide manufacturer's 10 year warranty against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Corian or approved substitution.

2.2 SOLID SURFACE SHEET MATERIALS

- A. See Drawings for specific Manufacturer selected.
 - 1. Composition: Acrylic resins, fire-retardant mineral fillers, and proprietary coloring agents. Through-the-body color for full thickness of sheet material.
 - a. 1/2" thickness
 - b. Edge detail to be eased.

2.3 ACCESSORIES

- A. Adhesive: Type recommended by manufacturer.
- B. Joint Sealer:
 - 1. As recommended by the manufacturer.

2. Color: To be selected from manufacturer's full color range.

2.4 FABRICATION

- A. Cut panels accurately to required shapes and dimensions.
- B. Radius exposed edges.
- C. Fabricate with hairline joints.
- D. Cut holes for sinks and faucets.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean surfaces to receive countertops; remove loose and foreign matter than could interfere with adhesion.

3.2 INSTALLATION

- A. Install countertops in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Adhere countertops to supports as per manufacturer's recommendations.
- C. Set plumb and level. Align adjacent pieces in same plane.
- D. Install with hairline joints. Fill joints between countertops and adjacent construction with joint sealer; finish smooth and flush.

3.3 INSTALLATION TOLERANCES

- A. Maximum variation from level and plumb: 1/8 inch in 10 feet, noncumulative.
- B. Maximum variation in plane between adjacent pieces at joint: Plus or minus 1/16 inch.

3.4 CLEANING

- A. Clean countertops in accordance with manufacturer's instructions.

3.5 PROTECTION

- A. Protect installed countertops with non-staining sheet coverings.

END OF SECTION

SECTION 09 77 00

FIBERGLASS REINFORCED WALL PANELS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Prefinished polyester glass reinforced plastic sheets and adhered to unfinished gypsum wallboard.
- B. Anodized aluminum trim
- C. Products Not Furnished or Installed under This Section:
 - 1. Gypsum [Cementitious] substrate board.
 - 2. Resilient Base.

1.2 SUBMITTALS

- A. Product Data: Submit sufficient manufacturer's data to indicate compliance with these specifications, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Shop Drawings: Submit elevations of each wall showing location of paneling and trim members with respect to all discontinuities in the wall elevation.
- C. Selection Samples: Submit manufacturer's standard color pattern selection samples representing manufacturer's full range of available colors and patterns.
- D. Samples for Verification: Submit appropriate section of panel for each finish selected indicating the color, texture, and pattern required.
 - 1. Submit complete with specified applied finish.
 - 2. For selected patterns show complete pattern repeat.
 - 3. Exposed Molding and Trim: Provide samples of each type, finish, and color.
- E. Manufacturers Material Safety Data Sheets (MSDS) for adhesives, sealants and other pertinent materials prior to their delivery to the site (available as downloads for most Marlite's products at <http://www.marlite.com/tech-details.aspx> or by contacting Marlite at info@marlite.com).

1.3 QUALITY ASSURANCE

- A. Conform to building code requirements for interior finish for smoke and flame spread requirements as tested in accordance with:
 - 1. ASTM E 84 (Method of test for surface burning characteristics of building Materials)
 - a. Wall Required Rating – Class A.

- B. Sanitary Standards: System components and finishes to comply with:
 - 1. United States Department of Agriculture (USDA) / Food Safety & Inspection Services (FSIS) requirements for food preparation facilities, incidental contact.
 - 2. Food and Drug Administration (FDA) 2013 Food Code 6-101.11.
 - 3. Canadian Food Inspection Agency (CFIA) requirements.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials factory packaged on strong pallets.
- B. Store panels and trim lying flat, under cover and protected from the elements. Allow panels to acclimate to room temperature (range of 60 to 75°F) for 48 hours prior to installation.

1.5 PROJECT CONDITIONS

- A. Environmental Limitations: Building are to be fully enclosed prior to installation with sufficient heat (70°) and ventilation consistent with good working conditions for finish work
- B. During installation and for not less than 48 hours before, maintain an ambient temperature and relative humidity within limits required by type of adhesive used and recommendation of adhesive manufacturer.
 - 1. Provide ventilation to disperse fumes during application of adhesive as recommended by the adhesive manufacturer.

1.6 WARRANTY

- A. Furnish one-year guarantee against defects in material and workmanship.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. Marlite; 1 Marlite Drive, Dover, OH 44622. 800-377-1221 FAX (330) 343-4668 Email: info@marlite.com www.marlite.com.
- B. Product:
 - 1. Standard FRP

2.2 PANELS

- A. Fiberglass reinforced thermosetting polyester resin panel sheets complying with ASTM D 5319.
 - 1. Dimensions:
 - a. Thickness – 0.090 “ (2.29mm) nominal
 - b. Width and Length- As indicated on the drawings to minimize pieces.

- c. Square - Not to exceed 1/8 " for 8 foot (2.4m) panels or 5/32 " (3.96mm) for 10 foot (2.4m) panels

- B. Properties: Resistant to rot, corrosion, staining, denting, peeling, and splintering.
 - 1. Flexural Strength - 1.7×10^4 psi per ASTM D 790.
 - 2. Flexural Modulus - 6.0×10^5 psi per ASTM D 790.
 - 3. Tensile Strength - 8.0×10^3 psi per ASTM D 638.
 - 4. Tensile Modulus - 9.43×10^5 psi per ASTM D 638.
 - 5. Water Absorption - 0.17% per ASTM D 570.
 - 6. Barcol Hardness (scratch resistance) of 30 as per ASTM D 2583.
 - 7. Izod Impact Strength of 7.0 ft. lbs./in ASTM D 256

- C. Back Surface: Smooth. Imperfections which do not affect functional properties are not cause for rejection.

- D. Front Finish: Pebbled

Specifier Note: Marlite's Standard FRP panels are available in several configurations, including Class A (I) and Class C (III) Fire-rated, along with various surface textures - smooth and pebble.

- E. Color: P100 White

2.3 MOLDINGS

- A Aluminum Anodized Trim: Heavy weight extruded aluminum 6063-T5 alloy prefinished at the factory.
 - 1. Profiles:
 - a. F 550 Inside Corner, 8' length
 - b. F 561 Outside Corner, 8' length
 - c. F 565 Division, 8' length
 - d. F 570 Edge, 8' length
 - e. Color: Brite Satin Anodized

2.4 ACCESSORIES

- A. Adhesive: Either of the following construction adhesives complying with ASTM C 557.
 - 1. Marlite C-551 FRP Adhesive - Water- resistant, non-flammable adhesive.
 - 2. Marlite C-915 Construction Adhesive - Flexible, water-resistant, solvent based adhesive, formulated for fast, easy application.
 - 3. Titebond Advanced Polymer Panel Adhesive - VOC compliant, non-flammable, environmentally safe adhesive.

- B. Sealant:
 - 1. Marlite Brand MS-250 Clear Silicone Sealant.
 - 2. Marlite Brand MS-251 White Silicone Sealant.
 - 3. Marlite Brand - Color Match Sealant.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Examine backup surfaces to determine that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface.
 - 1. Verify that stud spacing does not exceed 24" (61cm) on-center.
- B. Repair defects prior to installation.
 - 1. Level wall surfaces to panel manufacturer's requirements. Remove protrusions and fill indentations.

3.2 INSTALLATION

- A. Comply with manufacturer's recommended procedures and installation sequence.
- B. Cut sheets to meet supports allowing 1/8" (3 mm) clearance for every 8 foot (2.4m) of panel.
 - 1. Cut and drill with carbide tipped saw blades or drill bits, or cut with shears.
 - 2. Pre-drill fastener holes 1/8" (3mm) oversize with high speed drill bit.
 - a. Space at 8" (200mm) maximum on center at perimeter, approximately 1" from panel edge.
 - b. Space at in field in rows 16' (40.64cm) on center, with fasteners spaced at 12" (30.48 cm) maximum on center.
- C. Apply panels to board substrate, above base, vertically oriented with seams plumb and pattern aligned with adjoining panels.
 - 1. Install panels with manufacturer's recommended gap for panel field and corner joints.
 - a. Adhesive trowel and application method to conform to adhesive manufacturer's recommendations.
 - b. Drive fasteners for snug fit. Do not over-tighten.
- D. Apply panel moldings to all panel edges using silicone sealant providing for required clearances.
 - 1. All moldings must provide for a minimum 1/8 "(3mm) of panel expansion at joints and edges, to insure proper installation.
 - 2. Apply sealant to all moldings, channels and joints between the system and different materials to assure watertight installation.

3.3 CLEANING

- A. Remove excess sealant from panels and moldings. Wipe panel down using a damp cloth and mild soap solution or cleaner.
- B. Refer to manufacturer's specific cleaning recommendations Do not use abrasive cleaners.

END OF SECTION

SECTION 09 90 00
PAINTS AND COATINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Surface preparation and field painting

1.03 REFERENCES

- A. All references shall be the latest adopted edition.
- B. MPI – Architectural Painting Specification Manual, as published by the Master Painters and Decorators Association.
- C. SSPC – Steel Structures Painting Council, Steel Structures Painting Manual.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Provide product data on each different paint finishing product.
- C. Paint Schedule: Provide schedule of all proposed paint products for the items to be painted in format matching the Schedule found in Part 3 of this Section.
- D. Paint Draw Down Samples: Submit two painted samples, illustrating selected colors for each color and system selected. Submit on heavy paper card stock, 8 x 10 inch in size.
 - 1. Sheen Samples: Submit samples of different sheens for each color as directed by Architect for selection.

1.05 QUALITY ASSURANCE

- A. Single Source Responsibility: All paint products used for painting a given material/surface shall be manufactured by the same company.
- B. Applicator Qualifications: Company specializing in performing the work of this section with minimum five years successful experience.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable code for flame and smoke rating requirements for products and finishes.

1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and or as required by manufacturer's instructions and/or MPI MANUAL.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Provide environmental conditions as required by paint manufacturer, MPI Manual and as follows:
 - 1. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer's written literature.
 - 2. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer's written literature.
 - 3. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 - PRODUCTS

2.01 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, select products complying with MPI standards from the following acceptable Manufacturers:
 - 1. Paints:
 - a. Benjamin Moore & Company
 - b. Sherwin Williams
 - c. Parker Paint
 - d. Kelly Moore
 - e. No Substitutions.
 - 2. Stain/Oils/Waterborne Urethanes:
 - a. Proluxe or PPG Paints
 - b. Benjamin Moore & Company
 - c. Cabots
 - d. Dalys
 - e. Duckback
 - f. No Substitutions.
 - 3. Paints/stains must be products which installer has used on other projects

and are known to provide excellent performance including:

- A soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
 - Good hiding characteristics.
 - Good flow and brushing properties.
 - Good mildew-resistance.
 - Capable of drying or curing free of streaks or sags.
- B. Certain manufacturer's products may not provide adequate hiding ability with the number of coats specified. Contractor may be required to provide additional coats at no additional cost if products are selected that do not provide adequate hiding ability.

2.02 ACCESSORY MATERIALS

- A. Putty: Conform to FS TT-P-791A(3), colored to match paint and stain finishes, as applicable.
- B. Cementitious Filler: Nonshrink formulation, white Portland cement with fine silicate aggregate, zinc- oxide pigment, and reinforcing chemical binder as approved.
- C. Spackling Compound: Standard gypsum board compound.
- D. Unspecified materials such as turpentine, linseed oil, or mineral spirits shall be products of reputable manufacturers and as recommended by paint manufacturers.
- E. Materials for Undercoats and Finish Coats: Ready mixed, and shall not be changed, except thinning of undercoats (when required), reinforcing, or coloring, all of which shall be performed in accordance with manufacturers' recommendations.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate selection of paint products to be applied over prime coats applied by others for compatibility and good adhesion.
- C. Coordinate inspection of finish GWB surfaces with Section 09 29 00 prior to start of any painting work; identify and mark any defective areas for correction.
- D. Schedule work to follow completion of all dust/dirt producing work.

3.02 EXAMINATION

- A. Verify that surfaces are clean and ready to receive paint as required by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application or performance.
- C. Start of installation indicates acceptance of substrate, finish and conditions and responsibility for proper finish and appearance.

3.03 SURFACE PREPARATION

- A. Conform to MPI Manual surface preparation recommendations, paint manufacturer's recommendations and the following for preparation of each different surface scheduled to be painted:
- B. Substrate: Clean substrate surfaces thoroughly before applying any primer or paint following paint manufacturer's cleaning recommendations; allow substrate to dry thoroughly before starting paint application.
- C. Surface Appurtenances: Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- D. Marks: Seal with shellac those which may bleed through surface finishes.
- E. Mildew: Remove mildew by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Factory Primed/Painted Items to be Painted: Hand sand factory finished surfaces to provide proper tooth for good adhesion of finish coats.
- G. Exterior Ferrous Steel: Prepare surfaces to be painted in strict conformance with paint manufacturer's surface preparation requirements.
 - 1. Minimum Preparation: SSPC-SP6 Commercial Blast Cleaning of all surfaces in strict conformance with SSPC Steel Structures Painting Manual requirements.
 - 2. Application of primer shall follow surface preparation immediately within the same day or surfaces will require repeating the preparation procedure.
 - 3. Surface preparation and prime painting shall be scheduled to coincide with warm, dry weather, minimum 60 degrees F and rising.
- H. Exterior Galvanized Steel, Stainless Steel and Aluminum: Prepare surfaces to be painted in strict conformance with paint manufacturer's surface preparation requirements.
 - 1. Minimum Preparation: SSPC-SP1 Solvent Cleaning of all surfaces in strict conformance with SSPC Steel Structures Painting Manual requirements. Acid etch surface as specifically recommended by the paint manufacturer.

2. Application of primer shall follow surface preparation immediately within the same day or surfaces will require repeating the preparation procedure.
3. Surface preparation and prime painting shall be scheduled to coincide with warm, dry weather, minimum 60 degrees F and rising.

3.04 PROTECTION

- A. Protect all finish surfaces, landscaping, adjacent property and elements surrounding the work of this Section from overspray, damage or disfiguration.
- B. Maintain subfloor surfaces free from paint and spills using heavy paper or other method.

3.05 APPLICATION

- A. Apply products in accordance with manufacturer's instructions and MPI Manual.
- B. Apply sufficient wet film thickness to provide good hiding, do not thin product.
- C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- D. Do not apply finishes to surfaces that are not dry.
- E. Allow applied coats to dry completely before next coat is applied.
- F. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
- G. Vacuum clean surfaces of loose particles. Remove dust and particles just prior to applying next coat.
- H. Gypsum Board & CMU Surfaces: After paint has been spray or roller applied to uniform wet film thickness, backroll entire surface in same direction to provide uniform texture, reflective value and appearance, free of roller marks or lines.

3.06 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Remove louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.07 CLEANING

- A. Collect waste material which may constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.08 SURFACES THAT REQUIRE PAINT FINISH

- A. Paint all materials/surfaces described below under SCHEDULE - PAINT SYSTEMS.
- B. Firestopping/smoke seal exposed to view.
- C. Factory-finished items that require painting:
 - 1. Access panels/doors
- D. Mechanical and Electrical: Use paint systems defined for the substrates to be finished.
 - 1. Mechanical grilles and louvers
 - 2. Paint exposed to view insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, and hangers, brackets, collars, supports, and related similar items to match background surfaces
 - 3. Paint shop-primed items.
 - 4. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.

3.09 SCHEDULE - PAINT SYSTEMS (ALL WORK IS MPI PREMIUM GRADE)

- A. All materials/surfaces scheduled hereinafter shall be painted in accordance with designated MPI Systems and Product requirements.
 - 1. Sheen on finish coats shall be as selected by Architect from manufacturer's paint sheen samples.
 - 2. Use the same manufacturer for each coat specified for a given system, do not intermix different manufacturer's products within the same paint system unless specifically approved by manufacturer(s) and products are known to be compatible for use together.
 - a. Where primer is applied by others:
 - 1) Select paint system compatible with primer installed by others.
 - 2) Test compatibility and adhesion of proposed paint products over primer prior to application.
 - b. Paint failure due to incompatibility between different manufacturer's products are Contractor's responsibility to correct.
- A. Mechanical and Electrical:
 - 1. Exposed conduit, uncovered piping and exposed ductwork in finished spaces: Waterborne, 3 coats.
 - (1) One coat galvanized primer.
 - (2) Two coats acrylic enamel. (eggshell)
- B. Interior:
 - 1. Gypsum board, plaster and concrete, typical: Waterborne, 4 coats.
 - (1) One coat latex PVA primer sealer (apply before application of texture coat).
 - (1) One coat latex primer (apply after application of texture coat).
 - (2) Two coats acrylic enamel. (Finish eggshell)
 - 2. Hollow Metal Doors and Frames: Solvent base, 3 coats.
 - (1) One coat primer.

- (2) Two coats alkyd enamel. (Semi-gloss)
3. Ferrous Metal (Not Galvanized): Solvent base, 3 coats.
 - (1) One coat rust-inhibitive primer.
 - (2) Two coats alkyd enamel. (Semi-gloss)
4. Galvanized Metal: Solvent base, 3 coats.
 - (1) One coat galvanized metal primer.
 - (2) Two coats alkyd enamel. (Semi-gloss)
5. Wood Doors: Waterborne Polyurethane, 3 coats.
 - (3) Three coats waterborne polyurethane. (satin)
6. Wood Trim: Waterborne Polyurethane, 3 coats.
 - 3) Three coats waterborne polyurethane. (satin)

END OF SECTION

SECTION 10 14 00

IDENTIFICATON DEVICES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Divisions 00 and 01 Specification Sections, apply to work of this section.

1.02 SECTION INCLUDES

- A. Interior Building Signage see schedule
- B. Exterior Building signage see schedule

1.03 PERFORMANCE REQUIREMENTS

- A. ADA Accessible Signage shall comply with to ICC / ANSI A117.1 Chapter 7 including the Washington State Amendments. Signage shall comply with IBC, Chapters 9, 10 and 11 including color requirements.
 - 1. Character Proportion: Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10.
 - 2. Color Contrast: Characters and symbols shall contrast with their background – either light characters on a dark background or dark characters on a light background.
 - 3. Raised Characters / Symbols: Letters, numbers and symbols shall be raised 1/32-inch minimum; letters and numbers shall be sans serif characters and have a height between 5/8-inch and 1-inches.
 - 4. Braille: Grade 2 with accompanying raised text.

1.04 REFERENCES

- A. References shall be the edition current as of the date of the Contract Documents.
- B. International Code Council / American National Standards Institute (ICC / ANSI):
 - 1. ICC / ANSI A117.1 – Accessible and Usable Buildings and Facilities.
- C. International Building Code (IBC).
- D. Washington State Building Code – Amendments To International Building Code and ICC / ANSI A117.1.

1.05 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Submit manufacturer's technical data for each type of sign or manufactured component required.
- C. Shop Drawings: Indicate size, thickness and finishes for each sign type; include methods of attachment for each different substrate and sign type. Provide details and sections at full size. Proposed deviations from the Contract Drawings shall be clearly identified.
 - 1. Installer to submit CAD generated location plan noting the location of each sign and cross referenced to sign type schedule.
 - 2. Copy Layout: Provide scaled drawings showing copy layout for each sign type. Show exact letter, number, symbols, arrows, letter / word / line size, spacing, margins, braille, etc. positioned within the sign face outline. Copy layouts will be adjusted during Architect's review when required to conform to the design intent; revise and resubmit for final approval.
- D. Text Information Supplied by Owner: Allow 60 days for Owner verification of signage text and room numbering during submittal process.
- E. Sign Samples: Submit two (2) different sign types for verification of materials, colors, graphics / pattern, typography, braille, method of attachment including fasteners if applicable, overall workmanship quality and conformance to Contract Drawing and Specification requirements. One sign type must show paper insert window. Acceptable samples will be retained on file as the standard of quality for the signage.
- F. Color Samples: Provide three (3) samples (3-inch x 5-inch minimum size), of each different color and texture required; samples shall be the actual materials used in signage and not photographic facsimiles.
- G. Operations and Maintenance Data: Submit operation and maintenance instructions for signage and electrical components.
 - 1. Provide cleaning instructions for each different surface / finish exposed to view on signage.
 - 2. Provide a comprehensive Signage Manual in both a paper and PDF format. The Manual shall include shop drawings, signage location plan, signage type and copy schedule, computer graphics files, paper insert templates, mounting details and signage reorder information.
 - a. Include listing of product and color selections (manufacturer product and color number) for each different finish and color applied on signage.

1.06 QUALITY ASSURANCE

- A. Sign and graphic components are to be by a single manufacturer, including necessary mounting options, fittings and fastenings.
- B. Signage Manufacturer Qualifications: Not less than 5 years of successful experience in manufacturing signage similar in type and scope to those required for this project, with record of successful manufacturing and sufficient capacity to produce the required signage within the project schedule.
- C. Workmanship / Quality: Signage manufacturer shall employ the best fabrication practices common to the signage industry and to the highest standards of workmanship. Fabrications shall be free of imperfections in material and workmanship and suitable for its intended use and location.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable code and ICC / ANSI A117.1 for requirements for the physically handicapped.

1.08 FIELD CONDITIONS

- A. Conduct inspection of conditions on project site and review of signage locations.
- B. For signage that must fit closely within an architectural detail, field measure and adjust sign to fit in the space.
- C. Field verify / measure dimensions and review site conditions prior to submitting shop drawings.
- D. Coordinate signage work with Contract Drawings, change directives and as-built conditions.

1.09 DELIVERY, STORAGE AND HANDLING

- A. Package signage for protection during shipping, storage and installation.
- B. Products should remain in original packaging until installation. Store products in a dry, indoor location.

PART 2 - PRODUCTS

2.01 INTERIOR SIGNAGE

- A. Manufacturer / Product: 2/90 Sign Systems; *SafeCare* is the basis of design and standard of quality, performance and function required for this project. Other manufacturers with signage systems that meet or exceed this standard and the requirements of this section may submit a substitution request in accordance with the provisions of Section 01 60 00.
- B. Sign Construction:
1. Constructed from three primary components: Lexan back plate, SSADA thermoformed copy, and Lexan front plate.
 - a. SSADA Thermoformed Copy:
 - 1) High Performance Cast PVC vinyl bonded with a profile film reverse cut by computer, and applied subsurface to clear, vacuum thermoformable PETG in a Heat Vacuum Applicator (HVA) to form around the three-dimensional graphics, afterwards the Braille is then punched.
 - 2) SSADA is back sprayed with acrylic lacquer. Taped to Lexan back plate with Tesa Tape and encapsulated by Lexan front plate.
 - b. SSADA Thermoformed Copy with Laser-Print Removable Paper Insert:
 - 1) Front Plates of signs utilizing paper insert are masked prior to painting to show a viewable area.
 - 2) Pocketed area is created by 0.030-inch ABS spacer above and below the viewable area with adhesive on both sides to join the SSADA to the 0.015-inch support insert which has also been back sprayed with acrylic lacquer with flex additive.
 - 3) SSADA thermoformed copy consists of High Performance Cast PVC vinyl bonded with a profile film reverse cut by computer, and applied subsurface to clear, vacuum thermoformable PETG in a Heat Vacuum Applicator (HVA) to form around the three-dimensional graphics, afterwards the Braille is then punched.
 - 4) SSADA is back sprayed with acrylic lacquer and laminated to 0.015-inch support insert with Tesa Tape and encapsulated by Lexan front and back plate.

2. Lightweight and pliable sign with no hard edges or movable parts.
 3. Laser-Print Paper Insert to allow for changes of graphics installed on the sign without changing the sign in its entirety.
- C. Mounting: Wall Mount – Screw (D-Mount).
1. Adhesive and screw mount per manufacturer’s installation instructions.
 2. Adhesive: Loctite; *Power Grab Clear Construction Adhesive*.
 3. Mounting Hardware: 95115A205 Tamper-Resistant Flat Head Screw with Spanner Head and Anchor 30583.
- D. Typography:
1. Copy:
 - a. ADA Copy: ADA SSC.
 - b. Non-ADA Copy: Laser Print for window inserts with paper.
 2. Copy Color, Style, Size, Position and Case: As indicated in the Sign Types.
 3. Copy shall be a true, clean accurate reproduction of typeface(s) specified.
 4. Letter spacing and in-between line spacing shall be set by manufacturer.
 5. Arrows, Symbols and Logo Art: To be provided in style, sizes, colors and spacing as shown in Drawings or as indicated in the Sign Types.
 6. Braille: Grade 2.
 - a. Translations: Grade 2 Braille copy is responsibility of the sign manufacturer.
- E. Graphic Process:
1. SSADA: High Performance Cast PVC vinyl bonded with a profile film reverse cut by computer, and applied subsurface to clear, vacuum thermoformable PETG and processed thru a Heat Vacuum Applicator (HVA) to form around the three dimensional graphics, afterwards the Braille is then punched. SSADA is back sprayed with acrylic lacquer and adhered to Lexan back plate or spacer.
 2. Laser Print Copy: Computer generated graphics laser printed on die-cut paper Insert.

2.02 VINYL FILM

- A. Vinyl Film: Premium quality, 2.0 mil, cast vinyl, opaque with high performance, permanent, clear pressure-sensitive acrylic adhesive.

B. Manufacturers / Products:

1. Avery Dennison; *SC 900 Super Cast Series*.
2. Oracal; *951*.
3. 3M Company; *Scotchcal Series 7125*.

2.03 FABRICATION – SIGNAGE

- A. General: Fabricate interior signs from new materials using the best fabrication procedures, practices and workmanship that is common to the signage industry.
- B. Design components allow for expansion and contraction for a minimum material temperature range of 56 degrees C (100 degrees F), without causing buckling, excessive opening of joints or over stressing of adhesives and fasteners.
- C. Form work to required shapes and sizes, with true curves, lines and angles. Provide necessary rebates, lugs and brackets for assembly of units.
- D. Contact surfaces of connected members must be true. Assembled so joints will be tight and practically unnoticeable, without use of filling compound.
- E. Signs shall have fine, even texture and be flat and sound. Lines and miters sharp, arises unbroken, profiles accurate and ornament true to pattern. Plane surfaces should be smooth, flat and without oil-canning, free of rack and twist. Maximum variation from plane of surface plus or minus 0.032-inches. Restore texture to filled or cut areas.
- F. Extruded members to be free from extrusion marks. Square turns and corners sharp, curves true.
- G. Conceal fastenings where possible. Exposed ends and edges mill smooth, with corners slightly rounded.
- H. All painted surfaces properly primed. Finish coating of paint to have complete coverage with no light or thin applications allowing substrate or primer to show. Parts are checked for approval against the color match master chip. Finished surface smooth, free of scratches, gouges, drips, bubbles, thickness variations, foreign matter and other imperfections.
- I. Movable parts (paper inserts and sliders), including hardware, are to be cleaned and adjusted to operate as designed without binding or deformation of members. Doors and covers centered in opening of frame. All contact surfaces fit tight and even without forcing or warping components.
- J. Shop fabricate so far as practical and pre-assemble items to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for re-assembly and coordinated installation.
- K. There shall be no visible labels, manufacturer's or otherwise, code permitting, on the completed signs. If labels are required, a sample label and intended location must be included with submittal for Architect's review.

2.04 FARICATION – CUT VINYL

- A. Cut Vinyl: Conform to manufacturer's requirements for surface cleaning and application.
1. Die cutting shall be executed in such a manner that all edges and corners are true and clean.
 2. Adhesion to substrate shall be permanent.

2.05 INTERIOR SIGNAGE TYPES

- A. Signs conforming to IBC and ICC / ANSI A117.1 requirements consisting of unframed acrylic plaques with tactile text (letters and numbers), Braille characters and tactile graphics (universal symbols).

B. Sign Type S1 – Room Identification:

1. Signage Type: ADA ID with Permanent Name.
2. Overall Size: 8.5-inch wide x 9.75-inch high.
3. Copy:
4. Copy Text: Room Number in Upper Panel with Braille and Room Name centered in Lower Panel.
Copy Color: White (708).
Copy Style: Interstate Regular.
Copy Size:
Room Number: 1-inch.
1-Line Room Name: 1-inch.
2-Line Room Name: 5/8-inch.
Copy Position: Center (C)
Copy Case: All CAPS.
5. Sign Color: Owner to select from manufacturer's standard colors.

C. Sign Type S2 – Restroom ID:

1. Signage Type: ADA Regulatory Symbol.
2. Overall Size: 8.5-inch wide x 10.5-inch high.
3. Copy:
Copy Text: "RESTROOM" with Braille below text.
Copy Color: White (708).
Copy Style: Interstate Regular.
Copy Size: 5/8-inch.
Copy Position: Center (C).
Copy Case: All CAPS.
4. ADA Graphics: Manufacturer's Standard ADA Restroom Graphics for Unisex Restroom.
5. Sign Color: Owner to select from manufacturer's standard colors.

D. Sign Type S3– Exit Sign With Braille:

1. Sign Type: ADA Regulatory Symbol.
2. Overall Size: 8.5-inch wide x 10.5-inch high.
3. Copy:
Copy Text: "EXIT" with Braille below text.
Copy Color: White (708).

Copy Style: Interstate Regular.

Copy Size: 1-inch.

Copy Position: Center (C).

Copy Case: All CAPS.

4. ADA Graphics: Manufacturer's Standard ADA Wheelchair Graphic centered in lower section of sign to indicate ADA Accessible Exit.
5. Color: Owner to select from manufacturer's standard colors.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Install signs after painting work has been completed.
- C. Coordinate signage installation with work of other trades.

3.02 EXAMINATION

- A. Examine the substrate and conditions under which the signs are to be installed and verify that all such work is complete for proper installation of the signs.

3.03 INSTALLATION

- A. Install signs in accordance with Drawing details, manufacturer's instructions and approved submittals. Install in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other Sections.
- B. Restore damaged finishes. Clean and protect work from damage.
- C. Installer shall notify General Contractor of unsatisfactory conditions; installer shall not proceed until unsatisfactory conditions are corrected.
- D. Verify that substrate surfaces are ready to receive work.
- E. Start of installation indicates acceptance of substrate and conditions as acceptable.
- F. Sign installation Foreman shall be present on site and directly controlling the signage installation work at all times that signage work is in progress on site.
- G. Install signage in locations noted on Drawings in accordance with manufacturer's installation instructions.
- H. Install signs level, plumb, and true.
- I. Mount signage in conformance with location requirements contained in the IBC, ICC / ANSI A117.1 and Washington State Building Code Amendments.

- J. Mount signage securely to substrate surface in conformance with mounting methods shown on shop drawings and in compliance with manufacturer's instructions.
- K. Installation shall be performed by manufacturer's personnel trained and experienced in manufacturer's recommended installation methods and procedures.
- L. Install signage level, plumb and at the proper height with sign surfaces free from defects. Mounting height shall be in accordance with ADA requirements. Refer also to Drawings / schedules for signage installation requirements.
- M. Upon completion of the work, remove unused or discarded materials, containers and debris from site.

3.04 WORKMANSHIP

- A. Signage shall be installed using the best workmanship, including the following:
 - 1. Consistent color, gloss and finish appearance; surfaces free of discoloration, hazing, inconsistent gloss, or defects.
 - 2. Signs installed plumb, level, in square alignment and at required height.
 - 3. No scratches, stains or damage on signs.
 - 4. Finished surfaces free of discoloration, hazing, inconsistent gloss, or defects.

3.05 CLEANING

- A. Clean sign surfaces and touch up any flaws or marring caused during installation. Signage shall be clean and free of glue, tape, and other extraneous materials.
- B. Clean the site and signage, removing debris related to the installation of the signs.

3.05 PROTECTION OF WORK

- A. Protect signage from damage during construction.
- B. Repair any finishes on signs and surrounding architectural surfaces damaged during field installation so there is no evidence of corrective work. Return items which cannot be refinished in the field to the shop, make required alterations, and refinish the entire unit or provide new unit at fabricator's option.

3.06 FIELD QUALITY CONTROL

- A. Contractor Quality Control: Employ / assign quality control personnel to monitor the work of this section for conformance to the requirements of this section and to good construction practices.

- B. Contractor is solely responsible for managing and controlling the quality of the work and conformance with the requirements of this section.

3.07 SCHEDULE

- A. Restroom Doors and drinking fountain Post Barrier Free ADA signage as required. See sheets A-2.1 for locations and Sheet A-0.2.
- B. Exterior exit doors See sheets A-2.1 for locations and Sheet A-0.2.
- C. All interior rooms with doors to have room numbers. See sheets A-2.1 for locations and Sheet A-0.2. Room numbers to be posted beside or on each door. Determine locations with Owner.
- D. Exterior door to hot water tank. See sheets A-2.1 for locations and Sheet A-0.2. Room numbers to be posted beside or on each door. Determine locations with Owner.

END OF SECTION

SECTION 10 21 00
PHENOLIC CORE TOILET PARTITION SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Phenolic core compartment partitions for following applications:

- a. Toilet enclosures.
- b. Privacy screens.
- c. Urinal screens.

1.2 REFERENCES

A. ASTM International (ASTM):

- 1. ASTM A 240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- 2. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- 3. ASTM A 743/A 743M - Standard Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application.
- 4. ASTM B 86 - Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings.
- 5. ASTM B 221 - Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- 6. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. International Code Council (ICC)/American National Standards Institute (ANSI):

- 1. ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities, as applicable to toilet compartments designated as accessible.

C. United States Department of Justice:

- 1. ADA - Americans with Disabilities Act, Excerpt from 28 CFR Part 36 - ADA Standards for Accessible Design.

D. GREENGUARD Environmental Institute (GREENGUARD):

- 1. GREENGUARD certified low emitting products.

SUBMITTALS

A. Product Data: Manufacturer's data sheets for each type of product indicated. Shop drawings to include fabrication details, description of materials and finishes.

Product Test Reports: When requested by Architect, submit documentation by qualified independent testing agency indicating compliance of products with requirements.

PRODUCTS

Product spec and expectations of quality are for the BRADLEY CORPORATION PHENOLIC CORE TOILET COMPARTMENTS, **Bradley Corporation, Mills Metals Division, Menomonee Falls, WI 53051**. Contact Information: (800)272-3539, fax (262)251-5817; Email info@BradleyCorp.com; Website www.bradleycorp.com.

Equivalent substitutions will be considered by request.

B. Shop Drawings: Include overall product dimensions, floor plan, elevations, sections, details, and attachments to other work. Include choice of options with details.

C. Samples for Selection: Furnish samples of manufacturer's full range of colors for initial selection.

D. Samples for Verification: Furnish physical sample of material in selected color.

1. Size: 2 by 2 inch minimum, in type of finish specified.

INFORMATIONAL SUBMITTALS

A. Warranty: Sample of special warranty.

CLOSEOUT SUBMITTALS

A. Maintenance and cleaning instructions.

QUALITY ASSURANCE

A. Manufacturer Qualifications: Substitutions only considered for manufacturers with minimum **5** years of experience in the manufacture of toilet compartments.

DELIVERY, STORAGE, AND HANDLING

A. Do not deliver toilet compartments to site until building is enclosed and HVAC systems are in operation.

1. Deliver toilet compartments in manufacturer's original packaging.

2. Store laying flat.

WARRANTY

A. Special Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship during the following period after substantial completion:

1. Phenolic Core Toilet Partitions: Against delamination: 3 years.

MATERIALS

A. Phenolic Core: Compressed cellulose impregnated with phenolic resins. Provide smooth material, without creases or ripples.

B. Zinc Aluminum Magnesium and Copper Alloy (Zamac): ASTM B 86.

C. Stainless Steel Sheet: ASTM A 240 or A 666, 300 series.

D. Stainless Steel Castings: ASTM A 743/A 743M.

E. Aluminum: ASTM B 221.

PHENOLIC CORE TOILET COMPARTMENTS

A. Toilet Compartment Type:

1. Floor mounted overhead braced..

a. Basis of Design Product: Bradley, Mills Partitions, Sentinel, Series 400.

B. Sight Screen Type:

1. Floor mounted overhead braced.

Basis of Design Product: Bradley, Mills Partitions, Floor Braced, Series 400.

C. Door, Panel, and Pilaster Construction, General: All edges are black, machined and finished smooth with a 45-degree chamfered edge.

1. Provide exposed surfaces free of pitting, visible seams and fabrication marks, stains, telegraphing of core material, or other imperfections.

2. Core Material: Manufacturer's standard solid resin core of thickness required to provide finished thickness for doors, panels and pilasters.

3. No-Sight Feature: Rabbeted edge on doors and pilasters at hinge and latch side to provide full privacy.

E. Door Construction: 3/4 inch (19 mm) thick.

F. Panel Construction: 1/2 inch (13 mm) thick.

G. Pilaster Construction: 3/4 inch (19 mm) thick.

1. Provide pilaster with stainless steel mechanical fasteners for leveling.

H. Headrail: Extruded anodized aluminum headrail with anti-grip profile. Provide clamps for attachment to pilaster and stainless steel brackets to secure to wall.

I. Shoes: 4 inches (102 mm) high minimum, Type 304 stainless steel with No. 4 satin brushed finish. Provide concealed retainer clips to attach to pilaster.

J. Brackets (Fittings):

1. Stirrup Type: Ear or U-brackets; stainless steel.

2. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

K. Phenolic Core Finish: Manufacturer's standard impregnated, with one color in each room.

1. Color: As selected by Architect from manufacturer's full line.

HARDWARE

A. Hardware: Manufacturer's stainless steel castings with satin brushed finish, including stainless steel tamper-resistant fasteners:

1. Hinges: Self-closing surface mounted, through bolted, with gravity cams, adjustable to hold doors open at any angle up to 90 degrees, with emergency access by lifting door.
2. Door Latch and Keeper: Surface-mounted, indicator slide latch with emergency egress requires no twisting motion and complies with all Federal ADA guidelines. Keeper is mounted to the pilaster. Theft resistant fasteners are supplied with all the hardware.
3. Coat Hook: Combination hook and rubber-tipped stop, sized to prevent door from hitting compartment-mounted accessories. Provide wall bumper where door abuts wall. Provide formed L-shaped hook without stop at outswing doors. Mount with stainless steel through-bolts.
4. Door Pull: Standard unit on outside of inswing doors. Provide pulls on both sides of outswing doors.

FABRICATION

A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.

B. Door Size and Swings: Unless otherwise indicated, provide 26-inch- (660-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide clear opening for compartments designated as accessible.

EXECUTION

EXAMINATION

A. Examine work area to verify that measurements, substrates, supports, and environmental conditions are in accordance with manufacturer's requirements to allow installation.

1. Proceed with installation once conditions meet manufacturer's requirements.

INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

B. Install toilet partitions and screens in spaces with operating, temperature controlled HVAC systems. Shield partitions and screens from direct sunlight.

C. Clearances: Install with clearances indicated on Drawings. Where clearances are not indicated, allow maximum 1/2 inch (13 mm) between pilasters and panels, and 1 inch (25 mm) between panels and walls.

D. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than three brackets attached at midpoint and near top and bottom of panel. Locate wall brackets so holes for wall anchors occur in masonry or tile joints. Align brackets at pilasters with brackets at walls.

ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 15 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

FINAL CLEANING

A. Remove packaging and construction debris and legally dispose of off-site.

B. Clean partition and screen surfaces with materials and cleansers in accordance with manufacturer's recommendations.

END OF SECTION

SECTION 10 26 00

STAINLESS STEEL CORNER GUARDS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Stainless steel corner guards.

1.02 SUBMITTALS

- A. Product Data: Manufacturer's printed product data for each type of corner guard specified.
- B. Detail Drawings: Mounting details with the appropriate adhesives for specific project substrates.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Basis of design: JL Industries, Activar Inc. Construction Products Group
4450 West 78th St Circle, Bloomington, MN 55435
Telephone: 800-554-6077
Internet address: <http://sales@jlindustries.com>
www.activarcpg.com
- B. Other approved manufacturers: The Cornerguard store, Schluter, Vevor or Substitutions.

2.02 MATERIALS

- A. Stainless steel CFSS series, 18 gauge 1-1/2" legs, eased edges, model #CGSS90-1.5E-48. Concealed fasteners.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions in which the corner guard systems will be installed.
 - 1. Complete all finishing operations, including painting, before beginning installation of corner guard system materials.
- B. Wall surface shall be dry and free from dirt, grease and loose paint.

3.02 PREPARATION

- A. General: Prior to installation, clean substrate to remove dust, debris and loose particles.

3.03 INSTALLATION

- A. General: Locate corner guards as indicated on the drawings for the appropriate substrate and in compliance with the installation instructions. Install corner guard, level and plumb at the height indicated on drawings.

3.04 CLEANING

- A. At completion of the installation, clean surfaces in accordance with the IPC clean-up and maintenance instructions.

END OF SECTION

SECTION 10 28 00

TOILET AND MISCELLANEOUS ACCESSORIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Toilet and Miscellaneous Accessories

1.03 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Provide manufacturer's data on accessories describing size, finish, details of function, backing required and attachment methods.

1.04 PERFORMANCE

- A. Structural Performance: Design accessories and fasteners to comply with the following requirements:
 - 1. Grab Bars: Installed units are able to resist 250 lbf (1112 N) concentrated load applied in any direction and at any point.

PART 2 - PRODUCTS

2.01 TOILET AND MISCELLANEOUS ACCESSORIES

- A. Products listed are made by Bobrick Washroom Equipment or ASI American Specialties Inc. except as noted. These products are the standard of quality and function required for this project. All items of each type to be made by the same manufacturer. Products by the following manufacturers that meet or exceed this standard of quality and function are acceptable:
 - 1. ASI American Specialties, Inc.
 - 2. Bradley Corp.
- B. Metal: Type 304 satin finish stainless steel, or polished chrome-plated brass.
- C. Attachment Devices: Provide backing plates, brackets, and hardware required for a complete installation. Fastening shall be concealed and theft proof when available. Provide locks and furnish keys for standard lockable items.

- D. Accessory Items per each restroom: Bobrick is specified as the standard.
 - 1. Soap Dispensers: F.O.I.C.
 - 2. Paper Towel Dispenser: F.O.I.C.
 - 3. Toilet Paper Dispensers: F.O.I.C.
 - 4. Seat Cover Dispenser: F.O.I.C.
 - 5. Stainless Steel Grab Bars: ASI series 380 or Bobrick series B-6806 Series. Provide both horizontal and vertical grab bars in sizes and locations as shown on the Drawings. F.C.I.C.
 - 6. Single Robe Hooks: B-9542 F.C.I.C. Install on back of door (1) ea. Door and at changing stations.
- E. Changing Station: Koala Kare KB310-SSRE horizontal stainless steel recessed mounted baby changing station. F.C.I.C.
- F. Mirrors: 1/4" thick (tempered) polished plate or float glass, silver coated and electrolytically copper plated. Use concealed fasteners. Sizes as shown on drawings. Mirrors to match the width of each respective vanity. F.C.I.C.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate location, layout and type of openings and backing in walls to receive accessories with Section 06 10 00.

3.02 EXAMINATION

- A. Verify backing and installation conditions are correct before starting work.
- B. Verify exact location of accessories for installation.
- C. Verify that field measurements are as indicated on drawings.
- D. Start of installation indicates acceptance of backing and installation conditions.

3.03 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.04 INSTALLATION

- A. Install accessories in accordance with manufacturer's installation instructions in locations shown on the Drawings.

- B. Install plumb and level, securely and rigidly anchored to structural framing member or solid backing.
- C. Secure grab bars to framing members or solid backing securely so as to support 350 lbs. per support without distress or failure.
- D. Mounting Heights and Locations: As required by accessibility regulations and as indicated on drawings. See sheet A-0.3.

END OF SECTION

SECTION 10 44 00

FIRE EXTINGUISHERS AND CABINETS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions and Division 0 and 1 Specification Sections apply to work of this Section.

1.02 SECTION INCLUDES

- A. Fire Extinguisher Cabinets
- B. Fire Extinguishers

1.03 REFERENCES

- A. All references shall be the latest adopted edition.
- B. NFPA 10 - Standard for Portable Fire Extinguishers; National Fire Protection Association.
- C. UL (FPED) - Fire Protection Equipment Directory; Underwriters Laboratories Inc.; current edition.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Manufacturer's descriptive literature for specified products; indicate compliance to specified requirements.

PART 2 - PRODUCTS

2.02 MANUFACTURERS

- A. Available Manufacturers: Subject to conformance with the requirements of this Section, manufacturers offering products that may be provided for this project include, but are not limited to, the following:
 - 1. J.L. Industries, Inc. (Basis of design)
 - 2. Larsen's Manufacturing Company
 - 3. Potter-Roemer
 - 4. Substitutions: Refer to requirements in Section 01 60 00.

2.03 FIRE EXTINGUISHER CABINETS

- A. Cabinets style Fire Extinguisher Cabinets: Basis of Design J.L.

Industries, Inc. "Academy" Series 1027 sized to accommodate 2A10BC Fire Extinguisher, semi-recessed maximum amount allowed by wall framing. Locations as per drawings.

- B. Cabinet: 10-1/2" x 24" x 6"
 - a. Provide maximum recessment allowed by depth of wall framing. Fully recessed is desired.
 - b. Where Fire Extinguisher Cabinets can be mounted within wall framing this shall be the chosen method. Surface mounted must be approved by Architect/Owner.
- C. Bracket: Plated steel bracket for mounting on wall in cabinet, with quick release metal retaining strap to hold extinguisher securely to bracket. Provide for all extinguishers.
- D. Door & Frame: Clear anodized aluminum; tub to clear anodized aluminum
 - a. Projection: semi recessed
 - b. Configuration: Full door glazing w/ polished chrome pull handle
 - c. Glazing: Clear Acrylic
 - d. Trim style: 2-1/2" rolled edge
- E. Door hardware:
 - a. Continuous hinge, allowing 180-degree door swing.
 - b. Polished chrome handle
- F. Lettering: Die cut vinyl letters.
 - a. Lettering Color: LDCVRFE Red, 3/4" x 18" "FIRE EXTINGUISHER".
 - b. Placement: Vertical, on hinge side of door glazing, place on interior side of glazing to be read from exterior side; comply with all requirements of authorities having jurisdiction.

2.04 FIRE EXTINGUISHERS

- A. Fire Extinguishers: 2A10BC capacity.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate size and location of recessed openings in framed walls.

3.02 EXAMINATION

- A. Verify that wall openings are correct size and in correct locations.

3.03 INSTALLATION

- A. Install cabinets securely to wall framing in accordance with manufacturer's instructions and as required by local Code Authority.
 - 1. Install Extinguisher Mounting Bracket centered in cabinet.

3.04 ADJUSTING

- A. Immediately prior to project completion, ensure extinguishers (provided by others) are fully charged and bear tag recording date of charging and signature of verifying entity.

3.05 PROTECTION

- A. Protect exposed finishes of cabinets from damage by subsequent construction activities
- B. Repair minor damage to finishes in accordance with manufacturer's recommendations; replace components which cannot be repaired to Owner's satisfaction.

END OF SECTION

SECTION 10 80 00
ATTIC ACCESS LADDERS

PART 1 GENERAL

SECTION INCLUDES

- A. Access ladders.

SUBMITTALS

Submit under provisions of Section 01300.

- A. Shop Drawings:
 - 1. Standard Manufacturers Fabrication and Installation Details
- B. Qualification Data:
 - 1. Refer to Quality Assurance provisions for submittal requirements evidencing experience, certifications and resources.

QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in producing metal access ladders similar to those indicated for this Project.
 - 1. Record of successful in-service performance.
 - 2. Sufficient production capacity to produce required units.
 - 3. Professional engineering competent in design and structural analysis to fabricate ladders in compliance with industry standards and local codes.
- B. Installer Qualifications: Competent and experienced firm capable of selecting fasteners and installing ladders to attain designed operational and structural performance.
- C. Product Qualification: Product design shall comply with OSHA 1910.27 minimum standards for ladders.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify dimensions by field measurement before fabrication.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, indicate established dimensions on shop drawing submittal and proceed with fabrication.

1.8 WARRANTY

- A. A. Manufacturer has responsibility for an extended Corrective Period for work of this Section for a period of 5 years commencing on the shipment date of the product against all the conditions indicated below, and when notified in writing from Owner, manufacturer shall promptly and without inconvenience and cost to Owner correct said deficiencies.
1. Defects in materials and workmanship.
 2. Deterioration of material and surface performance below minimum OSHA standards as certified by independent third party testing laboratory. Ordinary wear and tear, unusual abuse or neglect excepted.
 3. Within the warranty period, the manufacturer shall, at its option, repair, replace, or refund the purchase price of defective ladder.
- B. Manufacturer shall be notified immediately of defective products, and be given a reasonable opportunity to inspect the goods prior to return. Manufacturer will not assume responsibility, or compensation, for unauthorized repairs or labor. Manufacturer makes no other warranty, expressed or implied, to the merchantability, fitness for a particular purpose, design, sale, installation, or use, of the ladder; and shall not be liable for incidental or consequential damages, losses of or expenses, resulting from the use of ladder products.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer and Basis of Design: **FACRO, FAKRO America LLC**, 39 W. Factory Rd Addison, IL 60101, phone: (630) 543-1010, fax: (630) 543-1011
- B. Substitutions: O’Keeffe’s, Inc.; 100 N Hill Drive, Suite 12, Brisbane, CA 94005. Toll Free Tel: (888) 653-3333. Tel: (415) 824-4900. Fax: (415) 824-5900. Email: info@okeeffes.com. Web: <http://www.okeeffes.com>.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PRODUCT DESCRIPTION

- A. Ship Ladder.

Model LME (30 x 54) as manufactured by FACRO Inc.

1 Hatch; insulated, sandwich type, beige, thickness: 1-3/8", thermal insulation thickness: 1-1/8", equipped with a lock.

2 Frame; pinewood, height: 5-1/2", gasket.

3 Ladder; metal, ladder width: 15", stringer height: 3-1/8", distance between steps: 9-7/8".

4 Steps; metal, equipped with anti-slip profile, step width: 3-1/8", length: 13-1/4"

5 Standard Accessories Stile ends and control rod for opening the hatch.

6 Size/Height; 30" x 54" for a 7'-9-5/8" – 10'-2" ceiling height from finish floor to floor above. Verify with as-built condition before installing.

7 Maximum loading; 400 lbs

8 Heat transfer coefficient; R-value: 5.3

9 Accessories as required for complete and safe installation meeting applicable building codes

PART 3 EXECUTION

3.1 EXAMINATION

- A. Coordinate anchorages. Furnish setting drawings, templates, and anchorage structural loads for fastener resistance.
- B. Do not begin installation until supporting structure is complete and ladder installation will not interfere with supporting structure work.
- C. If supporting structure is the responsibility of another installer, notify Architect of unsatisfactory supporting work before proceeding.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions and in proper relationship with adjacent construction.

3.3 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 12 32 00

PRE-MANUFACTURED CASEWORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, Supplementary Conditions and Divisions 0 and 1 Specification Sections, apply to work of this Section.

1.02 SECTION INCLUDES

- A. Pre-Manufactured Plastic Laminate Casework

1.03 REFERENCES

- A. All references shall be the latest adopted edition.
- B. AHA A135.4 - Basic Hardboard; American Hardboard Association
- C. ANSI A208.1 - Wood Particleboard
- D. NEMA LD 3 - High-Pressure Decorative Laminates; National Electrical Manufacturers Association
- E. PS 1 - Construction and Industrial Plywood
- F. PS 20 - American Softwood Lumber Standard

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Product Data: Provide manufacturer's data for casework, hardware and accessories.
- C. Shop Drawings: Provide plan and elevation view of all casework; indicate materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location and schedule of finishes.
 - A. Counter-Mounted and Under Counter Mounted Item (Sinks, appliances, etc.): Show location and size of cutouts for all counter-mounted items, including reinforcing and special requirements. Coordinate rough-in requirements and cut-out dimensions required to accommodate counter-mounted items with trade responsible.
 - B. Owner Provided Equipment/Appliances: Show location and size of all Owner provided equipment, including reinforcing and special requirements. Coordinate rough-in requirements and dimensions required to accommodate equipment/appliances with Owner.

- C. Coordinate all required dimensions, cutout sizes and rough-in requirements with Owner or trade responsible prior to submission.
- D. Samples:
 - A. Plastic Laminate: Submit two 8" x 11" samples of each different plastic laminate color selected.
 - B. Solid Surface: Submit two 2"x2" samples of each different solid surface color selection

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with AWI Quality Standards, Custom Grade, except where noted otherwise for specific elements of the work.
- B. Work in this Section shall comply with the specified Grade found in the Architectural Woodwork Institute Quality Standards (AWI).
- C. Woodwork Manufacturer/Fabricator: Company specializing in fabricating the products specified in this section with minimum five years of successful experience.

1.06 DELIVERY, STORAGE & PROTECTION

- A. Protect units from moisture damage.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. During and after installation of work of this section, maintain the same temperature and humidity conditions in building spaces as will occur after occupancy.

PART 2 - PRODUCTS

2.01 FABRICATION STANDARD

- A. Fabrication Standard: AWI Section 1600 Modular Cabinets Custom Grade, Flush Overlay Design Standard Edging, High Pressure Decorative Laminate Finish; except where modified by this Section and the Drawings to meet the requirements of this project.

2.02 WOOD MATERIALS

- A. Softwood Lumber (for use in concealed locations only): NIST PS 20; Graded in accordance with AWI P-200 Economy average moisture content of 11 percent.

2.03 PANEL MATERIALS

- A. High pressure decorative laminate at exposed surfaces, cores of boxes and tops are to be plywood/mdf no particle board allowed, heavy drawers to have plywood construction, shelf core is plywood, open shelf units plywood core, 3MM edge banding, melamine facing on shelving units and box interiors

2.04 PLASTIC LAMINATE MATERIALS

- A. Manufacturers: Provide manufacturer's listed on the Drawings to achieve colors/patterns specified.
- B. High Pressure Plastic Laminate conforming to NEMA LD 3 and the following:
 - 1. Vertical Applications: GP-33 (0.30 inch thick).
 - 2. Horizontal Applications: GP-50 (0.050 inch thick).
 - 3. Laminate Backing Sheet: BK20 (0.020 inch thick) backing grade, undecorated plastic laminate.
 - 4. Colors: From laminate manufacturers standard color selection.

2.05 HARDWARE & ACCESSORIES

- A. Adhesive: Type recommended by laminate manufacturer to suit application.
- B. PVC Edge Banding: 33mm PVC edge banding, hot melt glue applied at factory.
 - 1. Colors: Provide colors to match plastic laminate colors selected.
- C. Hardware, General: Unless otherwise indicated, provide manufacturer's standard satin-finish, commercial-quality, heavy-duty hardware.
Use threaded metal or plastic inserts with machine screws for fastening to particleboard except where hardware is through-bolted from back side.
- D. Frameless Concealed Hinges (European Type): BHMA A156.9, Type B01602, self-closing. Soft closing
- E. Cabinet Shelf Supports: Nickel plated steel L-shaped clips with steel pin which fits into 5 mm hole, with security pin for preventing inadvertent shelf removal.

Concealed Leg Knee Braces: Countertop support at toilet room vanities and front Lobby counter to be as manufactured by "The Original Granite Bracket" model number and quantity as appropriate to support the island countertop. 888-584-1112 <https://originalgranitebracket.com/collections/hidden-island-brackets/products/call-side-wall-hidden-granite-bracket?variant=31959962058849> or approved substitution
- F. Fasteners: Size and type to suit application.
- G. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application.
- H. Concealed Joint Fasteners: Threaded steel.
- I. Grommets: Plastic material for cut-outs. Colors: TBD.
- J. Edge trim: brushed aluminum trim for top of wainscot sheets and inside corners.

2.06 MANUFACTURERS

- A. The following are approved manufacturers. Substitutions allowed by request only, See Section 01 60 00 – Product Requirements.
1. Westmark Products
 2. Custom Source Woodworking, Inc. - (360) 491-9365 7745 Arab Dr SE, Unit D, Olympia, WA 98501
 3. Higher Plane – 360-733-4322, contact: Dave Rossman, 905 Division Street, Bellingham, WA 98226
 4. Interior Wood Products - 360-352-7273, contact: Brian Ritter, 9705 Lathrop Industrial Dr. SW Olympia, WA 98512
 5. RS Manufacturing – Mountlake Terrace, WA 425-774-1211
 6. Skagit Architectural Millwork – 800 N. 1st Street Mount Vernon, WA 360-336-9587.
 7. All Spaces, LLC – 360-873-8048, contact: Stuart Harr, 360-661-6117 mobile, 725 N. First Street Mount Vernon, WA 98273
 8. Valley Cabinets & More, Inc. Mount Vernon, WA. 360-542-1276 contact: Marc Roberson shop@valleycabinets.com
 9. Visser Cabinetworks, Inc. – 360-671-7270, 3965 Hammer Dr. Bellingham, WA 98226
 10. WW Wells Millwork – Everett, WA 425-259-9155
 11. Woodwork Unlimited – 425-334-5702, contact John Holdaway 425-343-2375 mobile, 2608 Harford Drive Lake Stevens, WA 98258
 12. Wollin Woodworking – 360-240-8403 Contact: Tyler Wollin 639 Industrial Ave., Unit C Oak Harbor, WA 98277
 13. Display Manufacturing L.L.C.
 14. NW Custom Cabinets - (360) 757-8788 Contact: Derek Slotemaker Peterson Road Burlington, WA 98233
 15. Cascade
 16. Pacific Cabinets
 17. Genothen
- B. Manufacturer Requirements.
1. Must have minimum 5 years' experience in casework fabrication and installation under one single business license of operation.
 2. Must have minimum 10 projects of municipal or government work.
 3. Demonstration of work meeting all references in 1.03.
 4. Manufacture of casework is to assume complete responsibility for final assemble unit for owner acceptance.
 5. Provide single source manufacture of parts in units.

2.07 FABRICATION - PLASTIC LAMINATE FACED CASEWORK

- A. Verify field conditions and dimensions prior to starting fabrication.
- B. Fabricate casework to conform to manufacture's published standard and these specifications.
- C. Fabricate in sizes and shapes indicated and as required to fit the spaces and conditions.

- D. Provide thermo-fused melamine overlay on all exposed interior faces of particleboard that do not receive plastic laminate; color as selected.
- E. Provide protective seal on concealed faces.
- F. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- G. Cap exposed plastic laminate finish edges with PVC edge banding.
- H. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.
- I. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners.
- J. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces; match liner color where exposed inside of cabinet or on back of doors and drawer fronts.
- K. Provide cutouts for fixtures and fittings. Verify locations of cutouts from on-site dimensions. Seal cut edges.
- L. Base: Provide base heights as noted on Drawings.
- M. Light Valance: Construct valance on upper cabinets wherever lighting fixtures are shown on Drawings.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Review, coordinate and accommodate work of other trades that interface with, affect or are affected by the work of this Section so as to facilitate the execution of the overall Work of this project in a coordinated and efficient manner.
- B. Coordinate backing requirements with Section 06 10 00.
- C. Casework installation shall be scheduled to follow painting.

3.02 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.03 INSTALLATION – CASEWORK

- A. Set and secure casework in place; rigid, plumb, and level in accordance with casework manufacturer's installation requirements.
- B. Field Joinery: Make joints neatly, with uniform appearance. Comply with requirements of AWI standard for shop joinery.
- C. Use fixture attachments in concealed locations for wall mounted components.
- D. Use concealed joint fasteners to align and secure adjoining cabinet units and counter tops.
- E. Secure cabinet and counter bases to floor using appropriate angles and anchorages.
- F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.
- G. If applicable cutout back of cabinet and backsplash for each plumbing waste, water line and electrical box individually; make accurate cuts that will be covered completely by escutcheon trim and cover plates.
- H. Install wainscot to wall surfaces with adhesive(s) Low VOC as recommended by manufacturer. Securely fasten to wall. Install aluminum trim strip at top of panel and at corners typical.

3.04 WORKMANSHIP

- A. Casework installation shall be installed using the best workmanship, including:
 - a. No damage to exposed finished surfaces or in view.
 - b. Casework scribed tight to adjacent surfaces.
 - c. Casework securely attached to wall framing/backing.
 - d. Accurate cut-outs for plumbing pipes and electrical devices/conduit in back of cabinet. Escutcheon plates shall cover gap if required.
 - e. Drawers open/close easily.
 - f. Doors and drawers align properly.
 - g. Door hinges not stiff or hard to open.
 - h. Countertops properly supported and installed level and secured in place.
 - i. Countertop joints tightly fitted and flush.
 - j. Edges of plastic laminate not over or under-filed.
 - k. No exposed fasteners.
 - l.

3.05 ADJUSTING

- A. Test installed work for rigidity and ability to support loads.
- B. Adjust moving or operating parts to function smoothly and correctly.

3.06 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings and fixtures.

END OF SECTION

SECTION 26 00 10

BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.01. APPLICABLE PROVISIONS

- A. The General, Supplementary and other Conditions of the Contract, modifications to the General Conditions, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Division and all its sections.

1.02. SUMMARY

- A. The requirements of this Section and the other Division 26, 27 & 28 sections apply to all the electrical work.
- B. Coordinate electrical work with related work shown and specified elsewhere.
- C. Work Included: The Contractor shall perform all the Work required (including the furnishing of all supervision, labor, services, tools, materials and equipment and the performance of all operations and incidentals necessary) for a complete, safe and reliable electrical installation, adjusted, tested and ready for operation. The electrical work is generally described as follows:
 - 1. Coordination and scheduling with Puget Sound Energy Co. for utility shutdown and restart.
 - 2. Coordination and scheduling of all electrical work.
 - 3. Demolition.
 - 4. Recycling of fluorescent ballasts and light tubes removed during demolition & fixture replacement.
 - 5. Modifications to the existing power distribution system including, feeders, panelboards, circuit breakers, disconnect switches, fuses, etc.
 - 6. Engine-Generator set & automatic transfer switch.
 - 7. Surge arrestor.
 - 8. Grounding.
 - 9. Wiring devices and special purpose receptacles.
 - 10. Lighting fixtures, lamps, track, poles and bases.
 - 11. Lighting controls, Lighting Control Panel and devices.
 - 12. Branch circuit wiring system for lighting, outlets, equipment, etc.
 - 13. Disconnecting means, switches, receptacles, motor starters, control devices, etc. (installation only if furnished with the equipment), and final power and line voltage (120 volt

or greater) control connections to equipment and devices provided by the Owner, General Contractor or other Sub-Contractors, including the following:

- a. HVAC equipment and associated variable frequency drives, line voltage control devices, etc.;
 - b. Plumbing systems equipment and associated variable frequency drives, line voltage control devices, etc.;
 - c. Kitchen equipment.
 - d. Appliances.
14. Line voltage (120 volt or higher) control stations, devices, conduit, boxes, wiring, etc. (installation only if furnished with mechanical equipment).
 15. Supports.
 16. Equipment backboards.
 17. Pull strings and ropes.
 18. Trenching and backfilling for underground electrical work.
 19. Cutting and patching, core drilling, etc.
 20. Moisture, fire and dust stopping and sealing.
 21. Temporary construction power & lighting.
 22. Testing and completing.
 23. Commissioning of electrical systems.
 24. Final cleaning.
 25. Obtaining and paying for all required licenses, permits, inspections and fees.
- D. Work not included: The following electrical system related work will be provided by the Owner, General Contractor, other Subcontractors, or Systems Contractors working directly with the Owner:
1. Mechanical Contractor: Mechanical equipment and systems low voltage control wiring, conduits, devices, etc. See mechanical specification sections and schedule on drawings.
 2. Mechanical Contractor: Mechanical equipment and systems line voltage control devices, etc (except, installation by Contractor). See mechanical specification sections and schedule on drawings.
 3. General Contractor: Appliances.
 4. Owner: Payment of utility service charges.

1.03. EXISTING CONDITIONS

- A. Before submitting bid, examine existing site (and building or equipment) conditions to determine effect on execution of the electrical work and include costs in bid.
- B. Existing circuits indicated on the plan are based on what was shown on the original building construction drawings and may not be exactly how the actual construction was done. The contractor shall expect that an extensive amount of circuit tracing to determine how the actual circuits are installed will be required.
- C. Underground utilities (electrical, water, sewer, cable television, etc.) are known to exist in the area of construction. The location of existing utilities shown on the drawings is approximate only and is not guaranteed to be an indication of all utilities in the area. The contractor is responsible for contacting the Owner and all utility companies and for field location of all utilities prior to construction. The one-call number for underground utility location services is 1-800-424-5555. The Contractor shall promptly notify the Engineer of any conflicts between the contract documents and field location of existing utilities. The Contractor is responsible for maintaining the integrity of all existing utilities during construction.
- D. Damaged electrical and telecommunications (telephone, computer/data, television, fiber, copper, etc.) cables shall be replaced in their entirety. Splicing will not be allowed.
- E. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.
- F. Restore site soils and plantings in trenching and backfilling areas and extend site restoration into adjoining areas to remain in a manner that eliminates evidence of trenching and backfilling.

1.04. PLAN REVIEW AND PERMITS

- A. The Contractor shall arrange for inspections and pay for all required licenses, permits, inspections, plan review fees and any other fees.

1.05. DEFINITIONS

- A. The term "Contractor" used throughout Division 26, 27 and 28 of these specifications and on the electrical drawings shall be understood to mean the Electrical Contractor. All other work shall be called out by name.
- B. "Approved" means approved by the Architect. "For approval" means for the Architect's approval.
- C. "Furnish" means to supply and deliver to the Project, ready for installation and in operable condition.
- D. "Install" means to incorporate in the work in final position, complete, anchored, connected, and in operable condition.
- E. "Provide" means furnish and install.

- F. "Remove" means to remove the existing item indicated and all associated conduit, boxes, cables, etc. to their point of origin and/or destination; except, concealed conduits and flush boxes may be abandoned in place and/or re-used in the new installation. Cables shall be removed and/or replaced.
- G. "Replace" means to remove the existing and add in lieu the new as indicated.
- H. "As directed" means as directed by the Architect.
- I. "Concealed" means hidden from sight in trenches, walls, chases, ceilings, etc.
- J. "Exposed" means within sight; that is, not concealed as defined above, and installed on the surface of walls, ceilings, etc.
- K. "Residential" areas mean within the apartment units. "Non-residential" areas mean all others.
- L. "C.O." means conduit only; that is, without cable (except, provide pull string or rope).
- M. "F.O.I.C." means Furnished by Others (e.g. general contractor, other subcontractors, equipment suppliers, Owner, systems contractors working directly with the Owner, etc.), Installed by Contractor.
- N. "N.I.C." means Not in Contract.
- O. See telecommunications section 27 05 00 for additional definitions.
- P. Definitions of all other terms, etc. are in accordance with AIA, ANSI, IEEE, IES, NEMA, etc. standard definitions.

1.06. DRAWINGS & SPECIFICATIONS

- A. The electrical plan drawings are general in form and do not attempt to show complete details or list every item of the electrical systems, the building construction or the various equipment (new or existing); however, the routing of raceways and circuits, and the locations of equipment, devices, fixtures, etc. Represent the desired finished arrangement; except, as governed by structural or mechanical conditions or obstructions.
- B. Existing circuits indicated on the plan are based on what was shown on the original building construction drawings and may not be exactly how the actual construction was done. The contractor shall expect that an extensive amount of circuit tracing to determine how the actual circuits are installed will be required.
- C. Specifications are, in some cases, written in an abbreviated form. Words such as shall, shall be, the Contractor shall, and similar mandatory phrases are supplied by inference.
- D. Investigate the structural and finish conditions affecting the work. Refer to the architectural, structural and mechanical drawings, supplier shop drawings and submittals, etc. for additional details, equipment ratings, dimensions, location and swing of doors, location and size of partitions, cabinets, etc. and similar features. Verify all dimensions, equipment ratings, etc. with the actual before installation. Arrange the work accordingly.
- E. The intent of the drawings and specifications is to include all items necessary for the proper execution and completion of the Work; however, any item or detail not specifically mentioned in

the specifications or shown on the drawings, but which is necessary to produce the intended results shall be included.

- F. The Contractor shall bring to the Engineer's attention any discrepancies, inconsistencies, conflicts, errors, or omissions within the Contract Documents, between the Contract Documents and field conditions, and any design and layout changes required due to specific equipment selection, etc. prior to equipment and material purchasing and installation. If Contractor purchases any equipment or materials and performs any construction activity, and it knows or reasonably should have known that the documents contain a discrepancy, inconsistency, conflict, error or omissions, corrective work shall be at the Contractor's expense.
- G. In the event that there are discrepancies between requirements shown on different sheets of the drawings or between the drawings and the specifications, the more restrictive of the requirements shall apply.
- H. Verify all equipment and device locations with the Owner and Architect prior to rough-in.
- I. Verify exposed raceway routing with the Owner, Architect and Engineer prior to rough-in.

1.07. SUBMITTALS

- A. Refer to Division 01, Section 01 33 00 Submittals.
- B. Submittals from the electrical contractor and each sub-contractor shall include a cover page indicating the company name, project manager name, and contact information for the contractor.
- C. Forward all submittals to the Architect, together in a complete package, at one time, in electronic format as single .pdf files for each specification section. Submittals for individual products or incomplete submittals are not acceptable and will be returned without review.
- D. Submittals shall be grouped by specification section and shall be arranged in the same order in which they are found in the specifications to facilitate the review process.
- E. Re-submittals, when requested, shall be provided as complete and comprehensive for each specification section. Re-submittals for individual products or incomplete re-submittals are not acceptable and will be returned without review.
- F. Provide submittals for the equipment, boxes, devices, fixtures, special raceways, systems and their components, etc. as directed in the various sections of the specifications.
- G. Prepare detail layout drawings to a larger scale than the contract drawings in areas where the work is of sufficient complexity to warrant additional detailing.
- H. Submittal drawings shall be on standard size sheets no larger than the contract drawings.
- I. Submit M.S.D.S. (Manufacturer's Safety Data Sheets) for all chemicals or hazardous materials. All chemicals and hazardous materials to meet NIOSH Permissible Exposure Levels (P.E.L.) and OSHA Time Weighted Average (T.W.A.) requirements before commencing work.
- J. If requested by the Owner, provide samples of materials for evaluation.

- K. Submittals shall provide sufficient detail so compliance with the drawings and specifications can be ascertained. Clearly identify each item by manufacturer, brand, trade name, number, size, rating, or whatever other data is necessary to properly identify and review materials and equipment.
- L. Catalog pages containing more than one product shall be marked with arrows to indicate the proposed product.
- M. Obtain approval before purchasing any products. Items not in accordance with the drawings and specifications will be rejected.
- N. The Contractor shall establish quantities, check drawings and data, verify space requirements, dimensions, and possible interferences prior to submittal. Submittals which indicate quantities will not be reviewed by the Engineer for accuracy of quantity.
- O. The Architect and Engineer will review each submittal, mark to indicate action taken, and return. Compliance with specified characteristics is the Contractor's responsibility.
- P. Approval of submittals does not release the Contractor from a proper installation, compliance with the drawings, specifications, codes, standards, etc. or coordination of the work.
- Q. Allow two weeks turnaround time for each submittal from the time of receipt at the engineer's office, except the engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until the related submittals are received.

1.08. SUBSTITUTE PRODUCTS APPROVAL

- A. Refer to Division 01, Section 01 25 00 Product Selection, Substitutions & Handling.
- B. During Bidding:
 - 1. Substitutions for equipment and materials other than that specified will be considered if equal (or better and/or higher) in quality, ratings and function; and similar in type, style, size and appearance.
 - 2. Submit written requests to Owner, Architect and Engineer.
 - a. If received no later than 7 work days prior to Bid opening, requests will be considered, but not thereafter.
 - b. Bidders will be informed by Addendum of any approved items.
 - c. No responses will be provided for rejected items.
 - 3. Requests shall be accompanied by complete specifications, samples, record or performance, certified tests by impartial, recognized laboratories, and other such information as required to clearly represent the proposed substitution.
 - 4. Lighting fixture substitution requests shall include photometric data.
 - 5. Final decisions as to quality and suitability of proposed substitutions rest solely with the Owner, Architect and Engineer, and will be based on proof submitted.

6. The cost of changes required in order to incorporate the proposed substitution, such as revisions to controls, raceways, wiring, openings, appurtenances, etc., shall be included in the bid. Any cost reduction resulting from substitutions shall benefit the Owner through a reduced bid.
7. When Owner, Architect and Engineer approve a proposed substitution, it is with the understanding that Bidder certifies that substitute articles or materials are equal to or better than those specified and that no exception is taken with any of the performance objectives, service or warranty requirements or features herein specified.

C. After Bidding:

1. Substitute products requests will not be considered.
2. Product substitutions are allowed solely under the conditions stated in Division 1 Section "Product Requirements."

1.09. RECORD DOCUMENTS

- A. Submit record documents at completion of the project in accordance with the specific submittal requirements listed elsewhere in these documents.
- B. Provide "as-built" drawings in both full size reproducible form and in software form as AutoCAD .dwg type files.
- C. All record documents in software form shall be transmitted in electronic format. Include the necessary program(s) to read test results. Separate submittals for the various disciplines will not be accepted.

1.10. "AS BUILT" DRAWINGS

- A. The Contractor shall continuously maintain a marked job set of as-built drawings as the work progresses, to indicate deviations from the original design, including change orders. Maintain records of all concealed wiring and of actual equipment, device, etc. locations. Provide dimensions from accepted reference lines as needed. The as-built drawings shall be kept on-site and available for inspection by the Owner.
- B. Include any detailed equipment, raceway, wiring, etc. diagrams and layouts prepared by Contractor or his subcontractors, suppliers, etc.
- C. At substantial completion, Contractor shall modify one complete set of reproducible copies, with all "as built" information and submit these drawings to the Owner for approval. Each sheet shall be marked "CORRECTED TO AS BUILT"; or, if there are no changes, drawings shall be marked "NO CHANGES, INSTALLATION PER PLAN".
- D. After approval, Contractor shall transfer all "as built" information from the marked job set and other information as appropriate to AutoCAD .dwg type files. (Consultant/Engineer will provide construction drawings AutoCAD files to contractor.) Utilize the layering scheme, font types, line types, title block, etc. provided in the AutoCAD drawing files. All drawings shall be noted as

“As-Built” with a stamp and date. After adding the “as-built” information, return the AutoCAD files to the Consultant/Engineer for inclusion into the final project record set.

- E. “As-built” drawings for all portions of the work shall be combined into a single set matching the contract documents. Separate submittals for the various disciplines will not be accepted.

1.11. OPERATION AND MAINTENANCE MANUALS

- A. Refer to Division 01, Section 01 78 23 Operation and Maintenance Data.
- B. Following installation of the electrical systems, but prior to acceptance of the work, Contractor shall submit to the Architect a preliminary O&M Manual in pdf format, with information systematically bookmarked and indexed for easy reference to be reviewed by the Owner, Architect and Engineer.
- C. Final copy of the manuals shall be compiled into a single .pdf file for the entire project, or a single .pdf file for each specification Division.
- D. Manuals shall include:
 - 1. Record documents (see above); except, full size reproducible bond paper copy of drawings to be provided separately.
 - 2. Product submittals, updated to "as built" conditions.
 - 3. Test results.
 - 4. Description of systems configuration and operation including component identification and interrelations, including diagrams and supplementary drawings where necessary.
 - 5. Installation, operation, maintenance and programming manuals covering the installed systems, equipment and materials.
 - 6. Maintenance instructions (frequency of service, type of service, etc.).
 - 7. Parts lists for all equipment; including recording information, recommended spares and anticipated useful life.
 - 8. Supplier's names, addresses, telephone and reference order numbers for all equipment and materials.
 - 9. Warranties and Bonds.
 - 10. Copies of final inspection certificates from the authorities having jurisdiction.
- E. Manuals shall not include:
 - 1. Non-applicable product data.
 - 2. Extraneous information that is not necessary for operation and maintenance.
 - 3. Foreign language product pages.

1.12. WARRANTY

- A. The complete installation shall be guaranteed for a period of one (1) year after date of project completion. For warranty purposes, the date of project completion shall be considered the date of final acceptance of the installation by the Owner certified in writing, and after Owner has received all project close-out requirements. All corrective work, if needed and requested by the Owner, shall be provided without cost to the Owner during the guarantee period.
- B. All corrective work performed by the Contractor in remedying defective work during the guarantee period following the Owner's acceptance of the project shall be subject to the same guarantee requirements of the original work for a period as specified from the date of completion of the corrective work.
- C. Corrective work shall include on-site service by the Contractor, subcontractor or supplier (e.g. fire alarm and telecommunications systems), and/or nearest technical service representative of the equipment manufacturer. Service shall be provided within 24 hours from the time of request for warranty service by the Owner.

1.13. TRAINING/INSTRUCTION AND ASSISTANCE

- A. After the installation is complete and operating, and prior to acceptance of the work, conduct a minimum of a one (1) hour training/instruction period at the site for each type of system to point out locations of service and maintenance and instruct the Owner's in the operation of all systems and equipment.
- B. The person(s) who conduct these instructions and demonstrations shall be a qualified representative(s) of the manufacturer with substantial training and operating experience on this equipment and project, and shall be versed in the operating theory as well as practical operation and maintenance work. Instructor(s) shall have the necessary educational and interpersonal skills, as well as proven ability to effectively perform the training. Their qualifications shall be submitted to the Owner before conducting the instruction period.
- C. Each period shall include preliminary discussion and presentation of information using the actual maintenance manuals required for this project. Contractor shall notify Owner and Engineer at least 48 hours in advance of readiness to conduct the instruction period. The actual time and date of instruction period shall be acceptable to the Owner and Engineer.
- D. All training material shall be furnished and supplied by the Contractor.

1.14. QUALITY ASSURANCE

- A. The Contractor and Contractor's personnel shall be experienced, thoroughly trained and completely familiar with the systems, equipment, devices, fixtures, materials, etc. and the required methods of installation.
- B. The Contractor shall provide, upon request, after bid opening and prior to notice to proceed, a company resume including a list of project personnel with years of experience and qualifications/certifications, a list of similar projects completed within the past 5 years with contact information for the Owners and Engineers for each project and any other information

which may be pertinent to the project. If requested, the Contractor shall provide a similar resume for sub-contractors.

- C. The Contractor shall provide proof, upon request, that all personnel are licensed according to Washington State RCW19.28.161.
- D. All materials, equipment and workmanship shall be properly inspected by the Contractor and shall at all times be subject to inspection by the Owner, Architect and Engineer. Contractor shall provide all samples, data and documents necessary for such inspection. Owner, Architect and Engineer shall be afforded full and free access at the jobsite and the shops and places of business of the Contractor for such inspection and to determine the status of the work. If Contractor covers all or any part of the work prior to any inspection or test specifically requested by Owner, Architect and/or Engineer, the cost of any necessary uncovering and replacing shall be borne by the Contractor.
- E. Neither the failure to make inspections or tests, nor to discover defective workmanship, materials or equipment, shall prejudice the rights of the Owner, Architect or Engineer thereafter to reject the work and/or require its correction.
- F. The completed installation shall comply with the more stringent of the requirements of the drawings and specifications, the authorities having jurisdiction, and all laws, ordinances, rules, regulations and requirements in effect at the site, including current editions of the following:
 - 1. NEC - National Electrical Code.
 - 2. National Electrical Safety Code.
 - 3. OSHA - Occupational Safety and Health Act (and its Washington State equivalent).
 - 4. ADA - Americans with Disabilities Act (and its Washington State equivalent).
 - 5. International Fire Code (and its Washington State equivalent).
 - 6. International Building Code (and its Washington State equivalent).
 - 7. Washington State Rules and Regulations for Installing Electrical Wires and Equipment (WAC 296-46).
 - 8. Washington State Safety Standards for Electrical Workers (WAC 296-45).
 - 9. Washington State Energy Code (WSEC).
 - 10. Washington State "Excavation, Trenching and Shoring" law.
- G. The following standards establish the minimum requirements for the equipment and installation, unless exceeded by the requirements of the drawings or specifications:
 - 1. ANSI - American National Standards Institute.
 - 2. BICSI – Building Industry Consulting Service International
 - 3. ICEA - Insulated Cable Engineers Association.
 - 4. IEEE - Institute of Electrical and Electronics Engineers.
 - 5. NEMA - National Electrical Manufacturers Association.
 - 6. NEIS – National Electrical Installation Standards
 - 7. NFPA - National Fire Protection Association.
 - 8. NECA – National Electrical Contractors Association
 - 9. EIA - Electronic Industries Association.
 - 10. TIA - Telecommunications Industry Association.
- H. Nothing in the drawings or specifications shall be construed to direct or permit work not conforming to applicable laws, ordinances, rules, regulations, requirements or standards.

Discrepancies or conflicts shall be brought to the attention of the Owner and Engineer promptly for resolution.

- I. The Owner and Engineer shall be advised prior to any inspection being requested. The Owner and Engineer shall be provided the opportunity to inspect the installation prior to wallboard, ceiling or finish installation. Any materials, equipment or workmanship that is not (in the opinion of the Owner, Engineer or Inspector) as it should be, shall be taken out and replaced without cost to the Owner.

PART 2 - PRODUCTS

2.01. GENERAL

- A. Coordinate the features of materials and equipment so they form an integrated system.
- B. Contractor shall make certain that all materials selected by him, his subcontractors or by his suppliers, conform exactly to requirements of the drawings and specifications. Transmittal of such specifications and drawing information to subcontractors, person manufacturing and/or supplying materials to the project, and rigid adherence thereto, is the Contractor's responsibility.
- C. All equipment, devices, luminaires, materials, etc. shall be UL (Underwriter's Laboratories, Inc.) listed, labeled and approved for the service intended where UL standards have been established. If no UL label is available, the label of a testing agency or conformance to national standards recognized and approved by the electrical inspector having jurisdiction is required.
- D. All equipment, devices, fixtures, materials, etc. shall be new and installed only if in first class condition.
 1. Unless specifically designated as existing.
 2. Existing raceways, boxes, etc. may be re-used if in "like new condition" and appropriate for the new installation.
- E. All equipment, devices, etc. and their components shall be designed for continuous duty without degradation of function or performance.
- F. In the event that any item is not available exactly as specified, the Contractor shall so notify the Owner and Engineer in writing prior to bidding as early as possible to allow ample time for an alternate item to be selected without delay to the project.

2.02. EQUIPMENT MANUFACTURERS

- A. Unless specifically noted otherwise, all references to manufacturer's or supplier's model numbers and other pertinent information herein is intended to establish minimum standards of performance, function and quality.
- B. All equipment, devices, materials, etc. shall be of a type manufactured by reputable recognized vendors. Each type or groups of items, system components, etc. having the same or similar function shall be the same manufacturer, make and quality throughout the facility.

- C. Approval of a manufacturer's name and/or type does not release the Contractor of the responsibility for providing materials which comply in all details with requirements in the contract documents.

2.03. SPARE CAPACITY

- A. Unless sizes and/or quantities are specifically indicated, provide at least 20% spare wiring capacity in all cabinets, panels, cable trays and raceways.

2.04. ENCLOSURES

- A. Equipment, devices, luminaires, boxes, etc. located indoors shall have general purpose (NEMA 1) enclosures.
- B. Equipment, devices, luminaires, boxes, etc. located outdoors shall be provided with weatherproof (NEMA 3R) enclosures. Surface finish shall be a rust inhibiting primer followed by an epoxy or polyurethane polyester top coat.
- C. Provide gaskets, seals, etc. as required to prevent the entrance of moisture, debris, insects, etc.
- D. Enclosures and boxes shall be fabricated from code gauge, or heavier, galvanized steel. Surface preparation and finish shall be manufacturer's standard unless noted otherwise.
- E. Include all necessary mounting, etc. accessories.

2.05. SUPPORTS AND CHANNEL

- A. Channel, framing members, etc. shall be 12 gauge steel, galvanized, 1⁵/₈ inch channel width with all necessary accessories.
- B. Beam clamps shall be steel, minimum 500 lb load rated.
- C. Threaded rod shall be steel, minimum ³/₈ inch diameter.
- D. Rooftop mounted conduit support bases shall be nonmetallic, UV resistant, and approved for use on the roofing material. Provide minimum 6 inches of space between bottom of conduits and roof surface. Rooftop support bases shall be Cooper B-Line C Series (or equal) with suitable support channel.
- E. Support posts for rooftop mounted equipment shall be 2 inch rigid metal conduit or 2 inch 12 gauge galvanized metal fence tubing. Provide with metal cap to prevent entrance of moisture into the building.

2.06. ANCHORS AND FASTENERS

- A. Anchors and fasteners used shall be of a type designed for use in the base material to which the item is to be attached. Attach to wood with wood or lag screws, to metal with machine screws or bolts and to concrete with carbon steel wedge or sleeve type expansion anchors or self-drilling metal anchors and machine screws or bolts.

- B. Pad and floor mounted equipment shall be secured with suitable hot dipped galvanized steel anchor bolts, washers, hex nuts, etc.
- C. Powder actuated fasteners, plastic expansion type anchors, nails and toggle bolts are not permitted.
- D. Anchors shall be non-corrosive or have suitable corrosion resistant coatings or treatment.
- E. Bolts, nuts, screws and other threaded devices shall have standard threads and heads, unless required for tamper-proof installation.

2.07. IDENTIFICATION

- A. Provide nameplates for all equipment (e.g. switchboards, panels, disconnecting means, control panels, control stations, etc.) and other devices used for the control of circuits, equipment, etc. Nameplates shall adequately describe the function or operation of the identified equipment, devices, etc. and include the panel and circuit number(s) from which it is fed. Nameplate designations shall be consistent with the project documents. Submit proposed inscriptions for approval.
- B. Provide nameplates for switchboards and panelboards to identify the system color coding scheme for phase and neutral conductors as required.
- C. Definite purpose devices shall be labeled with a description of the device's function, rating and include the panel and circuit number(s) from which it is fed.
- D. All equipment and outlets shall be labeled with the panel and circuit number(s) from which it is fed.
- E. Spare, C.O., etc. conduits shall be labeled with their destination.
- F. All non-underground medium voltage cables and conduits containing medium voltage cable shall be provided with suitable labels every 10 feet identifying the voltage of the cables and/or the cables within the conduits.
- G. Nameplates shall be laminated plastic, with lettering etched through the outer covering. Character size as appropriate for the application, approved by Engineer; ¼ inch except minimum 1/8 inch. Nameplates shall be securely fastened with suitable adhesive or self tapping screws. Character and background colors shall conform to the following system color code:

<u>Background.</u>	<u>Char.</u>	<u>System</u>
Black	White	Power & Lighting
Red	White	Fire Alarm

- H. Identification tags shall be plastic, flexible type with a label. Identification tags shall be securely fastened with cable ties. Tags shall be mounted so as to be clearly visible.
- I. Labels shall be heavy duty adhesive type, clear background with black letters on light colored devices and clear background with white letters on dark colored devices; except, labels on devices connected to the emergency power system shall have red letters. Lettering shall be appropriately sized for the application, ¼ inch except minimum 1/8 inch. Labels on ceiling

mounted devices shall be large enough to read from the floor. Labels shall be as manufactured by Kroy, Brothers, or approved equal. Self-adhesive circuit numbers, masking tape, plastic punch type "Dymo" labels, etc. are not acceptable.

PART 3 - EXECUTION

3.01. CONSTRUCTION/WIRING METHODS

- A. Wiring methods shall be as follows:
 - 1. Feeders - PVC conduit below grade (with GRS conduit risers for conduits 2" and larger) and EMT above grade.
 - 2. Branch circuits - PVC conduit below grade (with GRS conduit risers for conduits 2" and larger) and EMT above grade; except, surface metal raceway (SMR) where exposed in public areas, office, rooms, corridors, and the like where readily visible to building occupants.
- B. All wire and cable shall be enclosed within the raceway system.
- C. Raceways and cables shall be run concealed in the walls (including within CMU and similar construction), soffits (new and existing), above the ceiling or below the floor unless indicated otherwise; except, exposed within utility rooms and other similar type spaces. Raceways may be run exposed within public spaces, classrooms, offices, and the like only where indicated and with prior approval of the Owner and Architect. Exposed raceways shall be run as neatly and unobtrusively as possible, to the approval of the Owner, Architect and Engineer.
- D. Equipment shall be surface mounted unless noted otherwise.
- E. Devices, etc. shall be flush mounted unless noted otherwise.

3.02. CONTRACTOR CONTROL AND SUPERVISION

- A. Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the work in a skillful manner. 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, unless the Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Owner.
- B. Performance of the work shall be directly supervised by a competent superintendent (and/or foreman) who is satisfactory to Owner and has authority to act for Contractor. The superintendent (and/or foreman) shall constantly supervise the work and check all materials prior to installation for conformance with the Contract Documents. The superintendent (and/or foreman) shall not be changed without the prior written consent of Owner.
- C. Contractor shall enforce strict discipline and good order among Contractor's employees and other persons performing the Work. Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. Contractor's employees shall at all times conduct business in a manner which assures fair, equal, and nondiscriminatory treatment of all persons.

- D. Inappropriate activity or comments by Contractor, Contractor's employees and other persons performing the work will result in immediate removal from the site.

3.03. GENERAL

- A. The installation shall be done in a neat and workmanlike manner and shall be suitable for the location. Conduit stub-ups, sleeves and ends left open for future connection, unused hubs in fittings and unused holes in boxes shall be plugged or capped to prevent the entrance of moisture and debris.
- B. For the actual fabrication, installation and testing use only persons thoroughly trained, experienced and completely familiar with the items required and with the manufacturers' recommended methods of installation. In acceptance or rejection of the work, no allowance will be made for lack of skill or experience.
- C. Circuits shall be run from equipment to equipment, outlet to outlet, luminaire to luminaire, device to device, etc. and all homeruns shall be run as shown on the drawings unless permission is obtained from the Engineer to alter the arrangement.
- D. Changes in location (e.g. equipment and devices up to 10 feet, trench and raceway routing, cable tray locations, etc.) made before installation and deviations to avoid interferences shall be made without increase in Contract Sum.
- E. The Contractor shall conduct operations in a manner to avoid the risk of bodily harm to persons or damage to any property. Construction equipment and tools shall be in good operating condition and be designed to perform the work required. The Contractor shall continuously inspect all work to discover any unsafe conditions and be solely responsible for their correction.
- F. Use all means necessary to protect the equipment and materials and the work, materials, etc. of the other trades before, during and after installation. Do all cutting carefully to prevent damage to the work. Correct lifting, jacking and/or moving methods shall be used. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner and Engineer without increase in Contract Sum.
- G. The Contractor shall provide all cutting, patching, core drilling, etc. as required for the work. Use only journeymen skilled in the necessary cutting or patching operation. Patching shall match adjacent work. Structural members shall not be cut without approval of the Architect. Where penetrations in structural members for conduits, cables, etc. are allowed, the holes shall be no larger than absolutely necessary.
- H. Contractor shall x-ray or otherwise determine the exact location of existing structural components, conduits, piping, wiring, ducts and the like prior to making any new penetrations or openings (or expanding existing openings) in any floor, wall or ceiling.
- I. The premises shall be kept free from the accumulation of rubbish and debris caused by the work. Dust, fibers, debris, etc. caused by the work shall be cleaned up immediately (prior to the worker leaving the area, room or space) and not tracked to other areas, rooms, spaces, etc. Cleanup shall be with a vacuum cleaner or similar provided with a proper HEPA filter.
- J. The Contractor shall provide all backboards, hangers, supports, chases, anchor bolts, inserts, sleeves and other openings in the construction required for the electrical work.

- K. The Contractor shall move existing equipment, furniture, bookcases, boxes, miscellaneous (office, storage, maintenance, etc.) objects and materials, and other building furnishings, attached or unattached, as required to perform the work, including returning the items to their original location in their original condition.
- L. Wall, ceiling and floor penetrations by raceways (both inside and outside the raceway), cables, etc. shall be sealed to maintain the original moisture, dust and fire resistance to the approval of the Architect. Flash and counter-flash all roof penetrations.

3.04. PROTECTION OF PERSONS, FACILITIES & UTILITIES

- A. Provide all traffic control, flagging, barricades, barriers, guards, warnings, notifications, etc. at equipment, materials, open excavations, open trenches, etc. and post with warning lights. Barricades on or adjacent to public use and/or vehicular traffic areas such as buildings, roads, parking areas, pathways, etc. shall be chain link construction fence (minimum 6 feet high), locked when Contractor's personnel are not in the immediate vicinity.
- B. Provide heavy-duty steel plate (suitable for vehicle traffic) and/or encircle with chain link construction fence (minimum 6 feet high and locked) over all open excavations, open trenches, etc. when Contractor's personnel are not present in the immediate vicinity.
- C. Provide devices and methods and proceed with sufficient caution to preclude damaging any facilities, utilities (e.g. power, water, sewer, natural gas, telecommunications, etc.) or similar, above ground or underground, concealed or exposed, known or unknown, located or not located. In the event unidentified utilities are encountered, notify the utility, Owner and Engineer.
- D. Unless otherwise provided by the drawings or specifications, do not cut or alter any existing utility or similar without authorization of the Owner and Engineer. The Contractor shall pay all costs, as determined by the Engineer, of remedial work necessitated by unauthorized or accidental cutting, patching, trenching, excavating, backfilling, etc. which damages and/or impairs the performance of existing utilities or similar (e.g. power, water, sewer, natural gas, telecommunications, etc.), above ground or underground, concealed or exposed, known or unknown, located or not located.
- E. All such work shall be verified with Owner and Engineer before execution of replacement, re-routing, relocation, repair or termination commences.
- F. Notify Regulating Agencies, Locator Service, Utility Companies, Engineer and Owner's Project Manager a minimum of a minimum of fourteen (14) days in advance and re-confirmed a minimum of 48 hours in advance, or as mutually agreed upon with Owner, prior to commencement of any such work. Submit procedures to assure safe and continuous operation of the utilities for approval.
- G. Proceed with sufficient caution to preclude damaging any utilities or similar (e.g. power, water, sewer, natural gas, telecommunications, etc.), above ground or underground, concealed or exposed, known or unknown, located or not located. In the event unidentified utilities are encountered, notify the utility, Owner and Engineer.
- H. Provide a spotter at all times when excavation occurs by use of a backhoe or other mechanical equipment.
- I. Provide adequate means of support and protection during earthwork operations.

- J. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of Owner and utility, without increase in Contract Sum.
- K. Damaged electrical and telecommunications (telephone, computer/data, television, fiber, copper, etc.) cables shall be replaced in their entirety. Splicing will not be allowed.

3.05. COORDINATION AND SCHEDULING

- A. The Contractor shall coordinate the work and cooperate with the Owner, other trades and System Contractors to have the work completed to the best advantage, insure there are no interferences, provide reasonable opportunity for the other trades and Contractors to complete their work and to not delay the work.
- B. Work under this project will be undertaken with the facility in full operation.
- C. Contractor shall coordinate work to avoid disturbance to building operations and personnel, and to allow access for both persons to and within all portions of the facility and vehicles to the facility. Access to office spaces, classrooms, etc. will not be allowed when they are occupied. (Note that the offices, classrooms, etc. in areas other than the remodeled area will be occupied and in full operation.)
- D. Contractor shall coordinate and schedule with Owner's representative and the occupants of the individual space a minimum of fourteen (14) days in advance and re-confirmed a minimum of 48 hours in advance, or as mutually agreed upon with Owner, to determine dates and times that access to the Contractor will be allowed.
- E. Work in private offices, computer rooms, classrooms and the like shall only be done with the occupant's approval and at his or her convenience.
- F. Contractor shall schedule all equipment, utility, electrical, telecommunications, fire alarm, fire protection, etc. interruptions with the Owner in accordance with the scheduling requirements in Section 01500. Interruptions and closures shall not be extended overnight.
- G. Contractor shall schedule building closures, complete or partial, with the Owner in accordance with the scheduling requirements in Section 01500 (e.g. for x-raying).
- H. Any and all costs incurred for non-standard hours, double-shifts, overtime, etc. or any other costs associated with completing the project within the completion times required shall be included without increase in contract sum.

3.06. DELIVERY, STORAGE AND HANDLING

- A. All equipment and materials shall be stored neatly and out of the way. Conduit, fittings, cable, etc. shall be stored off the ground, protected from the weather in racks or bins or on shelves. Equipment, panelboards, fixtures, devices, etc. shall be stored indoors in a dry, warm area, free of dust and one in which condensation will not occur.
- B. Ship equipment in its original package to prevent damage or entrance of foreign matter. Perform all handling and shipping in accordance with manufacturer's recommendations and packing label instructions. Provide protective coverings during construction.

- C. Following installation, protect materials and equipment from corrosion, condensation, physical damage, and the effects of moisture. Keep openings in boxes or equipment closed when work is not being done in them during construction.
- D. Identify materials and equipment delivered to the site and storage organized to permit checking against approved material lists and submittals.

3.07. TEMPORARY POWER

- A. The Contractor shall provide all temporary power services, facilities, equipment, devices, material, etc. required for the construction; including adequate lighting, outlets, balancing, testing, etc. as may be necessary for the proper performance and inspection of the work.
- B. Electrical power at 120 volts, 1 phase for operation of lighting, small power construction tools and light-duty equipment may be obtained from the existing buildings, free of utility costs. During power interruptions, and if Contractor's equipment will not operate on the available power, the contractor shall supply all equipment needed, such as transformer(s), generator(s), etc. and pay all costs involved.
- C. The temporary power system shall be provided in a neat and safe manner, in compliance with governing codes and good working practice.
- D. The temporary power system shall be removed when no longer required.
- E. Any permanent 120V receptacles in the building which are used for temporary power during construction shall be replaced with new receptacles at the completion of the project.

3.08. UTILITY SERVICES

- A. The Contractor shall do all necessary coordination and scheduling with the utilities to disconnect utility power as required to complete the work.
- B. The Owner will pay utility service charges.

3.09. DEMOLITION

- A. Where existing walls and ceilings are to remain, Contractor shall remove all items indicated to be removed, and all associated equipment, devices, raceways, boxes, cables, etc. back to their point of origin and/or destination; except, concealed conduits & boxes may be abandoned in place and/or existing conduits and boxes may be re-used if in good condition and appropriate for the new installation, at the option of the Contractor.
- B. Where existing walls and ceilings are to be removed, Contractor shall remove all items, whether indicated or not, and all associated equipment, devices, raceways, boxes, cables, etc. back to their point of origin and/or destination; except, concealed conduits & boxes may be abandoned in place and/or existing conduits and boxes may be re-used if in good condition and appropriate for the new installation, at the option of the Contractor.

- C. Existing cables shall be removed or replaced. Provide pull strings in existing conduits being abandoned in place. Existing below grade conduits shall be cut off and capped flush with the floor. Existing concealed boxes shall be provided with suitable blank covers and/or wallplates.
- D. Label the ends of conduits abandoned in place with origin and destination description, and note locations on the as-built drawings.
- E. Where existing equipment, fixtures, devices, etc. are indicated to be replaced, remove and dispose of the existing and provide new in its place.
- F. For all items indicated as to be removed or re-wired, Contractor shall remove all associated conduit, boxes, cables, etc. back to their point of origin &/or destination; except, concealed conduits & boxes may be abandoned in place &/or existing conduits & boxes may be re-used if in good condition & appropriate for the new installation, at the option of the Contractor. Existing cables shall be removed or replaced.
- G. Existing equipment, fixtures, devices, etc. to remain shall be protected as required during demolition and construction. In the event of damage, immediately make all repairs and/or replacements necessary to the approval of the Owner and Engineer without increase in Contract Sum.
- H. Existing equipment, fixtures, devices, etc. to be re-used in the new work shall be removed carefully, and protected as required during demolition and construction. In the event of damage, immediately make all repairs and/or replacements necessary to the approval of the Architect and Engineer without increase in Contract Sum.
- I. Items not indicated shall remain "as is"; except, shall be re-connected as required if its circuit is interrupted during the demolition.
- J. Holes, openings, etc. where existing raceways, cables, boxes, outlets, etc. are removed and not replaced shall be patched to match adjacent surface.
- K. All surplus materials removed during the demolition shall be inspected by the Owner and those items selected shall remain the property of the Owner. All remaining surplus materials shall be removed from the site and disposed of by the Contractor without increase in Contract Sum.

3.10. INTERRUPTIONS

- A. Power, fire alarm, telecommunications and other systems interruptions, whether to individual equipment or to the entire system, shall not be done without prior approval and scheduling with the Owner. Power, fire alarm and/or telecommunications interruptions required to facilitate construction work and that affect operation of the existing facility shall not be done during normal working hours. Some working of non-standard or longer than standard hours will be required, without increase in Contract Sum. Also, see Section 01500.
- B. Power interruptions to panels and/or circuits feeding the existing telecommunications equipment, devices, etc. shall not exceed 1 hour, and then only during the lowest usage hours (typically between 11:00 p.m. and 6:00 a.m.).
- C. Telecommunications services shall be maintained to each outlet in the entire facility whenever the space is occupied (e.g. the entire facility during normal operating hours, except the areas being remodeled). Therefore during non-operating hours, new cables shall be provided, new outlets connected and/or existing outlets re-connected from the existing cabling system to the

new cabling system, cables terminated at the backboard, testing completed, cross-connects and migration completed, etc. and the systems returned to service before the space is occupied again.

- D. In order to minimize the interruptions to the individual systems and equipment, and to keep maximum power available to the facility; the new service and power distribution system shall be completed and energized before the existing service is de-energized and removed.
- E. As much as possible, items shall be pre-assembled and systems prefabricated to minimize the change-over time.
- F. Shutdowns will not be allowed to extend beyond the time Contractors personnel are present.

3.11. LOCATIONS

- A. Locations and mounting heights of equipment, devices, etc. shall be consistent, and in accordance with the requirements of NFPA, ADA and the authority having jurisdiction.
- B. Devices and associated wallplates shall be located so as to not span different types of building finishes.
- C. In general, surface raceways, cable trays, cable racks, etc. shall be mounted as unobtrusively as possible, tight against whiteboard trim, chair rails, in room corners, against ceilings, against chases, etc. and other breaks in the construction.
- D. Prior to rough-in, the Contractor shall mark or otherwise show the location of all equipment and devices, and the proposed routing of raceways. Obtain specific approval for the location of each from the Owner, Architect and Engineer before rough-in.
- E. Changes in location (e.g. equipment and devices up to 10 feet, trench and conduit routing, etc.) made before installation and deviations to avoid interferences shall be made without increase in Contract Sum.

3.12. EQUIPMENT, LUMINAIRES AND DEVICES

- A. Equipment, luminaires, devices, etc. shall be installed plumb and true, and shall be square with the adjacent walls, ceilings, structural members and other equipment; in a horizontal or vertical position as intended. The location of similar items shall be consistent.
- B. Light standards (poles), luminaires, etc. shall be set to stand plumb and true and shall be square with the adjacent buildings, property lines, sidewalks, roadway, etc.
- C. Equipment, cabinets, boxes, fixtures, devices, etc. shall be accurately mounted and leveled and be firmly supported either directly or indirectly by a sound and safe structural member of the building in accordance with manufacturer's instructions, or as directed. Supports shall be neatly placed and properly fastened. In addition to the weight of the equipment or material, allowance shall be made for vibration (e.g. motors and fans) and variable and/or shock loading from internal or external forces (e.g. operation of disconnect switches or circuit breakers).
- D. The correct lifting, jacking and/or moving gear which will prevent damage shall be used.

- E. All bolts, nuts, screws and other fastenings shall be tightened in accordance with manufacturers or listing instructions and all covers replaced on equipment and boxes. All electrical connections, particularly those on bus work in panelboards, etc. shall be checked to ensure tightness and electrical conductivity.
- F. Follow manufacturer's installation details wherever available. Provide supports, boxes, mountings, wiring, fittings, etc. as required, standard or special. Wherever any conflict arises between manufacturer's instructions, codes and regulations, and these Contract Documents, follow Owner's decision.
- G. Following installation, protect materials and equipment from corrosion, condensation, physical damage, and the effects of moisture. Keep openings in boxes or equipment closed when work is not being done in them during construction.
- H. Provide gaskets, seals, etc. as required to prevent the entrance of moisture, debris, insects, etc. Check for proper fit.

3.13. SUPPORTS

- A. Provide all necessary supports, anchors, fasteners, and backing for all raceways, cable trays, cable racks, boxes, enclosures, fixtures and equipment.
- B. Hangers and supports shall be made from standard structural shapes and hardware or systems of shapes, fittings and hardware designed for the purpose.
- C. Support cable trays with trapeze style hangers/systems, minimum 8 foot on center.
- D. Hangers and supports shall be adequately and safely attached to the building structure. Equipment or materials to be supported shall be securely fastened to the supporting means. Use size and number of attachments as required for a safety factor of at least four. In addition to the weight of the material, consideration shall be given to the weight of the support itself, the weight of materials within, vibration, external operational forces, shock load, etc.
- E. Brace all equipment, cable tray, cable racks, etc. as required to meet the requirements of Seismic Design Category D.
- F. Attach to wood with wood or lag screws, to metal with machine screws or bolts and to concrete with carbon steel wedge or sleeve type expansion anchors or self-drilling metal anchors and machine screws or bolts.
- G. Pad and floor mounted equipment shall be secured with suitable hot dipped galvanized steel anchor bolts, washers, hex nuts, etc.

3.14. CORROSION PROTECTION

- A. All material and equipment shall have corrosion protection suitable for the atmosphere in which they are installed.
- B. Maintain the integrity of factory provided corrosion protection. Repair damaged corrosion protection and touch-up paint all scratched, marred or damaged factory finish on equipment, devices, luminaires, enclosures, etc.; per manufacturer's instructions where available.

- C. Paint field cuts with a suitable cold galvanizing compound.

3.15. APPROVALS

- A. Prior to rough-in, the Contractor shall mark or otherwise show the location of all equipment and devices, and the proposed routing of raceways, cables, etc. Obtain specific approval for the location of each from the Owner, Architect and Engineer before rough-in.
- B. Prior to beginning installation of cables, obtain approval of concealed raceway installation from the Owner, Architect and Engineer.
- C. Prior to beginning installation of cables, obtain approval of the raceway installation from the Owner, Architect and Engineer.

3.16. CLEANING

- A. Remove trash, combustible material, and other debris from electrical rooms and areas around equipment.
- B. Remove shipping materials, supports, spacers, etc. from equipment, devices, etc.
- C. Remove all debris from equipment, devices, etc. including all scraps of wire, metal shavings, plaster, dust, and other foreign material.
- D. The top sides and interiors of all equipment and enclosures shall be vacuumed clean.
- E. The exterior of all equipment and enclosures shall be wiped down with a clean, dry, lint-free cloth or soft bristled brush.
- F. Clean screens, louvers, baffles, etc. covering ventilation openings to ensure they are clear.
- G. Remove paint splatters and other spots, dirt, and debris.
- H. Touch up scratches to match original finish.
- I. Remove all traces of soil, dirt, dust, smudges, fingerprints and other foreign matter from visible surfaces of equipment, devices, luminaires, etc. Pay close attention to highly finished surfaces such as glass and polished metals. Wipe lamps clean.
- J. Maintain adequate ventilation during cleaning.
- K. Follow manufacturer's instructions. Failure to follow manufacturer's recommendations when cleaning equipment can result in damage from the use of improper cleaning methods or agents.

3.17. VISUAL AND MECHANICAL INSPECTION

- A. Verify that all equipment and their components are sized properly for the load and the types, sizes, etc. are in accordance with the contract documents, approved submittals, etc.

- B. Visually inspect equipment for physical damage. Repair physical damage, if practical and approved by the manufacturer. Consult Owner, Engineer and manufacturer for recommendations for suitable protective barriers to prevent future damage.
- C. Inspect molded and formed equipment and components (e.g. circuit breaker cases, fuses, starters, relays, insulators, supports, etc.) for cracks or other defects.
- D. Check all bolts, connections, cable terminations, etc. for tightness using a calibrated torque wrench or screwdriver. Refer to manufacturer's instructions and markings for proper torque values.
- E. Visually check the equipment, its components and associated raceways, conductors, etc. for proper grounding and bonding. Ensure that grounding and bonding terminal bars, bus bars, straps, and conductors are properly connected.
- F. Verify that cables do not contact live parts and that cables are properly secured to withstand the effects of fault currents.
- G. Check equipment anchorage, mounting, clearances, alignment and fit of components.
- H. Check that phase barriers are in place, if applicable.
- I. Visually check disconnect switch blade alignment, blade penetration, travel stops, and mechanical operation.
- J. Inspect each fuse holder to determine whether it seems to be adequately supporting the fuse and that the fuse holders are securely attached to the mounting base. Verify fuses are set tightly in the clips provided.
- K. Operate equipment and components (e.g. disconnect switches, circuit breakers, etc.) to insure smooth operation.
- L. Motor bearings shall be checked for proper lubrication and the shaft turned to ensure it is free to rotate.
- M. Compare all circuits (internal and external) with wiring and/or control diagrams to verify they are installed correctly.
- N. Confirm correct operation and sequencing of electrical and mechanical interlock systems, if so equipped. Attempt closure on locked-open devices. Attempt to open locked-closed devices.
- O. Confirm that equipment nameplates and safety labels are provided.

3.18. TESTING

- A. The Contractor shall perform all tests required in the various sections of the specifications and in accordance with manufacturer's recommendations. Record test results and include in operation and maintenance manuals.
- B. The Owner and Engineer shall be notified one week prior to any testing so that the testing may be witnessed.
- C. All testing shall be performed by personnel that are trained in the specific task to be performed

- D. Do not proceed with tests until previously identified deficiencies are corrected.
- E. Test equipment in accordance with manufacturer's recommendations. Maintain test results for future comparisons. Include in operation and maintenance manuals.
- F. Upon completion, all equipment and systems shall be tested for functional operation, including all intended modes and sequences of operation.
- G. Readings of the voltage and amperage shall be taken on each phase at each panelboard and at the end of the longest branch circuit at no load and full load conditions.
- H. All systems shall test free from shorts and grounds and shall be without mechanical and electrical defects. If any test indicates a failure, in the opinion of the Engineer; the item shall be replaced or suitably repaired to the approval of the Owner, Architect and Engineer, and the test repeated without additional cost to the Owner.

3.19. ENERGIZING

- A. Verify proper conductor phasing prior to energizing.
- B. Energize equipment in accordance with manufacturer's recommendations.
- C. The Owner, Engineer and other affected personal shall be notified one week prior to energizing so that the energizing may be witnessed.
- D. Energize equipment, feeders, circuits, etc. from the source end and working to the load. Close main devices, feeder devices, motor/branch circuit devices, etc. in sequence.
- E. Verify all temporary grounding, etc. connections are removed prior to energizing.
- F. Verify that all load disconnecting, etc. devices are open, padlocked and tagged prior to energizing.
- G. After energization, equipment shall be observed for unusual conditions such as vibration, noise, excessive temperature rise, etc.

3.20. CONTRACT CLOSE-OUT

- A. As a requirement for substantial completion of the Work, the Contractor shall thoroughly check the installation. Checking shall consist of visual inspection and manual adjustment to confirm correct installation and arrangement and to assure the intended function, response and operability. Checking shall include, as a minimum, the following:
 - 1. Check that equipment, devices, etc. are of the correct type and rating.
 - 2. Check that all raceways, fittings, devices, boxes, enclosures, etc. are secure and that all conduit connections are tight.
 - 3. Check that all electrical connections are correctly tightened.
 - 4. Check that equipment, devices, panelboard circuit directories, etc. are correctly labeled.

5. Check that equipment, fixtures, devices, etc. are clean with all unnecessary labels removed.
- B. As a requirement for substantial completion of the Work, the Contractor shall:
1. Obtain final inspections from the authorities having jurisdiction.
 2. Perform final cleaning.
 3. Submit approved "As Built" Drawings, Record Documents, Test Records, Manuals, etc.
 4. Submit written warranty statements for equipment, materials and installation.
 5. Conduct system tests.
- C. After the requirements for substantial completion have been met, the contractor shall notify the Engineer in writing that the Work is substantially complete. The Engineer will then perform a final inspection of the installation and issue a "punchlist" for final completion.
- D. The Contractor shall complete the work on the punchlist or provide written explanation for not completing the work. The punchlist shall be signed by the contractor and returned to the Engineer when complete.
- E. The Engineer will re-inspect the Work to verify that all the items have been completed.
- F. The above process shall be completed a single time for the project. If additional punchlist and inspection cycles are required to be completed due to the contractors failure to complete items on the punchlist, the contractor will be backcharged for the Engineer's additional services on time and material basis through the construction contract.
- G. Subsequent to final completion and testing operations, instruct Owner's authorized representatives as required in operation, adjustment and maintenance of equipment and systems.

End of Section 26 00 10

SECTION 26 05 00

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.01. APPLICABLE PROVISIONS

- A. The General, Supplementary and other Conditions of the Contract, modifications to the General Conditions, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Division and all its sections.

1.02. SUMMARY

- A. The requirements of this Section and the other Division 26, 27 and 28 Sections apply to all the electrical work.
- B. Coordinate electrical work with related work shown and specified elsewhere.
- C. Provide all materials necessary for the proper execution and completion of the work as herein specified or called for on the drawings. Required items not specifically mentioned in the specifications or indicated on the drawings shall be provided as necessary to produce the intended results.
- D. In the event that any item is not available exactly as specified, the Contractor shall so notify the Engineer in writing as early as possible to allow ample time for an alternate item to be selected without delay to the project.

1.03. SUBMITTALS

- A. Provide submittals for the following:
 - 1. Exterior outlet boxes.
 - 2. Surface metal raceway.
 - 3. Surface device boxes.
 - 4. Hand holes, vaults, etc.
 - 5. Warning Tape.

PART 2 - PRODUCTS

2.01. RACEWAYS

- A. Raceways, where required, shall be of the types listed below, unless noted otherwise:
 - 1. Electrical Metallic Tubing (EMT) – above grade, except as noted below.
 - 2. Electrical Metallic Tubing (EMT) – Concealed above grade and exposed in Utility Rooms and other Non-Public Areas not readily visible to building occupants, except as noted below.

3. Surface Metal Raceway System (SMR) – Exposed in Public Areas, Offices, Rooms, Corridors and the like where readily visible to building occupants.
 4. Polyvinyl Chloride Conduit (PVC) - below grade, except as noted below.
 5. Galvanized Rigid Steel Conduit (GRS) – Below grade conduit elbows risers for raceways 2” and larger.
 6. Flexible Metal Conduit (FLEX):
 - a. Final connections to vibrating equipment.
 - b. Fixture whips.
 - c. Substituted for EMT for branch circuits between wiring devices and boxes concealed inside frame walls and ceilings.
 - d. Remodel work where circuit is fished into an existing wall.
 - e. FLEX shall not be used for any homeruns, conduit stub-ups into accessible ceiling spaces, nor for any exposed or surface conduit runs except as final connections to vibrating equipment.
 7. Type MC Cable - may be substituted for EMT for branch circuits concealed inside walls and ceilings, as follows:
 - a. From junction boxes to devices, luminaires, etc.
 - b. Between devices.
 - c. Type MC cable shall not be used for any homeruns.
 - d. Type MC cable shall not be used for any runs between junction boxes.
 - e. Type MC cable shall not be used any exposed or surface conduit runs.
 8. Type NM (ROMEX) Cable – extension or modification of existing branch circuits concealed inside walls and ceilings of the existing storage building. NM Cable may not be used for any new circuits or raceways.
- B. Raceways shall be sized so that the cable fill does not exceed 40%; except, minimum conduit sizes shall be as follows:
1. 1/2 inch - runs with 3 or fewer #12, or smaller; except flex shall be minimum 3/4 inch.
 2. 3/4 inch – above grade branch circuits, ancillary systems circuits or similar, except as noted below.
 3. 1 inch – branch circuit homeruns.
 4. 1 inch – below grade.

5. $\frac{3}{8}$ inch - fixture whips furnished by the manufacturer with the fixtures.
- C. PVC conduit shall be heavy-wall (Schedule 40), flame-retardant, suitable for use with 90°C cable, shall not distort from heat it will normally encounter and shall be resistant to low temperature and sunlight effects, impact and crushing.
 - D. PVC conduit installed in shallow trenches (less than 24" deep) shall be same as above, except, heavy wall Schedule 80 grade.
 - E. Galvanized rigid steel conduit (GRS) shall be hot-dipped galvanized with threaded couplings and connectors. Below grade steel conduits shall be coated with a suitable asphalt (or equivalent) compound for corrosion protection.
 - F. Electrical metallic tubing shall be electro-galvanized steel.
 - G. Flexible metal conduit shall be helically wound galvanized steel, type FMC; except outdoors, liquidtight flexible metal conduit shall have a liquidtight, non-metallic, sunlight-resistant jacket over a flexible galvanized steel metal core, type LFMC. Flexible conduit connections shall be a minimum of 18 inches long.
 - H. Telecommunications wall sleeves shall be 3" x 3" metallic wireways (sized to match the required raceways) which contain an intumescent insert material that adjusts automatically to cable additions or subtractions, Specified Technologies EZ Path, 3M Fire Barrier Pass-Through, or approved equal. Provide suitable wall brackets, gang kits, mounting hardware, etc. as required.
 - I. Surface metal raceways shall be heavy-gauge zinc plated or galvanized steel; Wiremold or Mono-Systems series 500, 700, 2000 or larger as required or approved equal. Color shall be manufacturer's standard color closest to matching surface color as possible.
 - J. Surface metal raceway boxes and raceway to be added to the existing shall match the existing and be specifically designed for use with the existing raceway system.
 - K. Conduit elbow radius and bends in conduits 2 inch diameter and smaller shall be not less than 6 times the conduit diameter, and in conduits 2 $\frac{1}{2}$ " and larger shall be not less than 10 times the conduit diameter; except for the following:
 - 1. 24 inch maximum radius when turning vertically into the bottom of floor mounted equipment.
 - 2. 24 inch maximum radius when turning vertically out of a trench with 24 inch cover.

2.02. RACEWAY FITTINGS

- A. Fittings for steel conduit shall be steel, galvanized or cadmium plated, threaded type. Couplings shall be galvanized steel. Locknuts and bushings shall be galvanized steel.
- B. Connectors, couplings, etc. for EMT shall be steel set-screw type; except, steel raintight compression type in potentially wet or damp locations (e.g. outdoors).
- C. Conduit bodies (i.e., type T, LB, LR, LL) shall be cast metal bodies with threaded connectors and screw covers. Increase size or bodies if required for fill and bending radius.

- D. Fittings, mounting brackets, etc. for surface metal raceways shall be grounding type, of the same manufacturer and specifically designed for the purpose and use with the particular type of raceway.
- E. Fittings for flexible metal conduit shall be of a type specifically designed for the purpose.
- F. Fittings for type MC cable shall be of a type specifically designed for the purpose.
- G. Fittings for nonmetallic conduits shall be of same manufacturer and material as the conduit.
- H. End bells and/or insulated bushings shall be used on all underground conduit system terminations at vaults, junction boxes, padmounted equipment, etc.
- I. Conduit terminations at equipment, etc. shall be suitably sealed and/or plugged at both ends to prevent the entrance of moisture. Spare, c.o., etc. conduits shall be provided with removable gasketed covers at the high end to prevent the flow of moisture from one box to another.
- J. Connectors at sheet metal enclosures shall have insulated throats.
- K. Openings in surface metal raceways, etc. through which cables are intended to pass shall be provided with suitable nonmetallic grommets before installing cable.
- L. Provide approved properly bonded expansion fittings (capable of expansion and contraction as required), deflection couplings, etc. wherever conduits pass over or through joints or other locations where raceways may be affected by dissimilar movements of the supporting structure.

2.03. BOXES

- A. The use of exposed boxes in areas readily visible to building occupants shall be kept to a minimum. Except in telecommunications raceways, use conduit outlet bodies (e.g. T, LB, LR, etc.) at conduit intersections unless specifically noted or approved otherwise.
- B. Boxes shall accommodate any devices to be installed and shall be sized as required by the applicable codes for number and size of conduits and cables entering and leaving; except minimum as noted below.
- C. Indoor boxes above grade in dry locations shall be standard stamped galvanized steel type, suitable for embedment in concrete and/or masonry where required.
- D. Surface mounted boxes installed in wet or damp locations and outdoors shall be threaded rigid body type, cast aluminum or galvanized iron.
- E. Unless noted otherwise, boxes installed in wet or damp locations and outdoors shall be threaded rigid body type, cast aluminum or galvanized iron.
- F. Surface metal raceway system boxes shall be of the same manufacturer and specifically designed for the purpose and use with the particular type of raceway and/or device to be mounted onto the box. Color shall match raceways.
- G. Unless noted otherwise, larger size pull and junction boxes shall be fabricated from code gauge galvanized steel.

- H. Unless noted otherwise, larger size pull, splice and terminal boxes shall be fabricated from code gauge galvanized steel, with full access screw type cover unless noted otherwise. Sizes shall be as required, except minimum as indicated. Terminal boxes shall be provided with power distribution type terminal blocks, with main and branch lugs sizes and quantities as required.
- I. Switch, power outlet, device, etc. boxes shall be single or ganged to accommodate the required number of devices; except, flush mounted boxes shall be minimum 4 inches square for conduits 1 inch or less and $4^{11/16}$ inches square for larger conduits. Boxes containing a single device shall be minimum $1\frac{1}{2}$ inches deep. Boxes containing multiple devices shall be minimum $2\frac{1}{8}$ inches deep. Flush mounted boxes shall be equipped with plaster rings and suitable wallplates. Surface mounted boxes shall have raised surface type covers.
- J. Junction and pull boxes shall be sized as required by the NEC except the minimum size shall be 4 inch, square or octagonal as required, by $1\frac{1}{2}$ inches deep. Junction and pull boxes shall have full-access screw covers.
- K. Boxes shall be equipped with mud rings where required and proper wallplates and/or covers.
- L. Unused flush mounted boxes, including existing abandoned in place, shall have blank wallplates or ceiling box type covers. Color shall match existing surface paint color as close as possible with manufacturer's standard colors.
- M. Openings in boxes, etc. through which cables are intended to pass shall be provided with suitable nonmetallic grommets.

2.04. WIRE AND CABLE

- A. Wire and cable sizes indicated and/or specified are minimums only and shall be increased as required due to NEC, system, load, voltage drop, etc. requirements.
- B. All wire and cable (power, control, ancillary systems, etc.) shall be suitable for wet or dry locations, in conduit, above ground and underground.
- C. Ground electrode conductors shall be copper, bare below grade.
- D. Service and below grade feeder cable shall be single conductor stranded copper with 600 volt type USE/RHH/RHW insulation.
- E. Branch circuit cable, above grade feeder cable and equipment ground cable, where run in raceways, shall be single conductor copper with 600 volt type XHHW or THWN/THHN insulation. The minimum conductor size shall be #12 AWG; except, fixture whips provided as an assembly by the fixture manufacturer with the fixtures may be #14 AWG. Conductors shall be stranded, except #12 AWG lighting and general purpose receptacle branch circuit conductors may be solid.
- F. Type MC cable shall consist of multiple individually insulated circuit conductors (with 600 volt type XHHW or THWN/THHN insulation) and a green insulated grounding conductor bundled together with fillers as necessary, binder tape and interlocking armor (aluminum or steel) wrapped around the assembly. MC cable shall be suitable for installation in wet or dry locations, at maximum conductor temperatures of 90°C for continuous normal operation, 130°C for emergency overload conditions and 250°C for short circuit conditions. MC cable shall pass the IEEE vertical cable tray flame test and be listed to UL 1, 2, and 3 hour through-penetration

fire wall ratings. Conductors shall be stranded, except #12 AWG lighting and general purpose receptacle branch circuit conductors may be solid.

1. Conductors within MC cables shall be color coded to be consistent with the building color coding scheme as indicated elsewhere in these specifications. Identifying conductors with colored tape or paint is not acceptable.

G. Type NM cable shall consist of multiple individually insulated circuit conductors (with 600 volt type THHN insulation) and a bare grounding conductor bundled together with fillers as necessary, binder tape and PVC jacket wrapped around the assembly, type NM-B. NM cable shall be suitable for installation in dry locations, at maximum conductor temperatures of 90°C. Conductors shall be stranded, except #12 AWG and smaller lighting and general purpose receptacle branch circuit conductors may be solid. The minimum conductor size shall be #14 AWG.

H. Cords shall be multi-conductor stranded copper with a green insulated grounding conductor, 600 volt type SO insulation and an overall neoprene jacket. The minimum conductor size shall be #14 AWG.

I. Fixture cable, where supplied by the Contractor, shall be stranded copper with 600 volt type PF insulation.

J. Instrument cable, unless otherwise required by the particular instrument, shall be multi-conductor solid copper with 300 volt PVC insulation, 100% aluminum polyester shield, stranded copper drain wire, and an overall PVC jacket. The minimum conductor size shall be #16 AWG.

K. Instrument cable, unless otherwise required by the particular instrument, shall be 2 conductor (twisted pair) solid copper with 300 volt PVC insulation, 100% aluminum polyester shield, stranded copper drain wire, and an overall PVC jacket. The minimum conductor size shall be #18 AWG.

L. Color coding for power cable shall be as follows:

1. 120/240 volt, 1 phase, 3 wire:
Phase A = black, B = red, N = white;
2. Equipment ground cables shall be green.
3. Switch legs shall be the same color as the phase conductors.

M. Cable pulling lubricants shall be gel type, of the best quality and shall not have any damaging effect on the insulation. (Ideal Yellow 77 is not approved.)

2.05. CABLE SUPPORTS

A. Supports for cables run "open" above ceilings and the like shall be wide base type J-hook assemblies capable of supporting up to 50 category 5 UTP cables, Erico CablCat series or equal. Support spacing shall not exceed 5 feet.

B. Cable ties shall be utilized in panelboards, etc. to group and support conductors. Multi-wire branch circuits shall be grouped together as required. All cable shall be fanned-out to terminals

and identified by labels; or, if terminated on circuit breakers or control devices, by typewritten indexes or nameplates.

- C. Type MC cable shall be supported and secured by staples, straps, hangars or similar fittings designed and installed so as to not damage the cable. Type MC cables shall be supported at intervals not exceeding 5 feet and within 12 inches of every box, cabinet or fitting.
- D. Type MC cable used as lighting fixture whips and/or manufacturer supplied fixture whips shall be properly supported in a neat and workmanlike manner, away from the suspended ceiling and the top of the fixture.
- E. Type NM cable shall be supported and secured by staples, straps, hangars or similar fittings designed and installed so as to not damage the cable. Type NM cables shall be supported at intervals not exceeding 4 feet and within 12 inches of every box, cabinet or fitting.

2.06. CONNECTIONS AND TERMINATIONS

- A. Taps and splices shall be kept to a minimum.
- B. Taps and splices in #8 AWG, and smaller, branch and fire alarm circuit cable shall be made with twist-on spring type wire nuts. Taps and splices in telecommunications cables, ancillary systems cables, larger branch circuit cables, feeder cables, control cables, etc. or below grade will not be allowed without specific approval from the Engineer.
- C. Taps and splices in #8 AWG and larger cable, where allowed, shall be made with proper size squeeze-type copper compression tap and splice connectors. (Mechanical set-screw type connectors will not be allowed.) Wrap completely with suitable electrical insulating tape or shrink-wrap in accordance with manufacturer's instructions.
- D. Splices in #8 AWG and larger cable, where allowed, shall be made with proper size compression-type sleeve splice connectors. Connectors shall match wire size and type, seamless copper tubing (for copper wire), electro-tin plated, center wire stop, chamfered barrel, color coded for correct wire size and UL486A/B listed, 600V, IIsco, Burndy, or approved equal. (Mechanical set-screw type connectors will not be allowed.) Use proper crimp tool specifically for use with connectors. Wrap completely with suitable electrical insulating tape or shrink-wrap in accordance with manufacturer's instructions.
- E. Fittings for type MC cable shall be of a type specifically designed for the purpose, and include a non-metallic anti-short bushing.
- F. Fittings for type NM cable shall be of a type specifically designed for the purpose.

2.07. WARNING TAPE

- A. Yellow 3" wide polyethylene metalized warning tape shall be direct buried 12 inches above the topmost underground conduits. For multi-use excavations and trenches, provide multiple tapes.
- B. Tape shall be printed with the words:
 - 1. "Caution, Buried Power Line Below" or similar above electrical conduits.

PART 3 - EXECUTION

3.01. RACEWAYS

- A. Raceways shall be run concealed in the walls (including within CMU and similar construction), soffits (new and existing), above the ceiling or below the floor unless indicated otherwise; except, exposed within utility rooms and other similar type spaces. Raceways may be run exposed within public spaces, classrooms, offices, and the like only where indicated and with prior approval of the Owner and Architect. Exposed raceways shall be run as neatly and unobtrusively as possible, to the approval of the Owner, Architect and Engineer.
- B. Raceways shall be installed straight, plumb and true and shall be without kinks or sags.
- C. Exposed raceway runs shall be either parallel or at right angles to walls and structural members, as neatly and unobtrusively as possible (e.g. adjacent to window and door trims and base, at wall/wall or wall/ceiling intersections, etc.). Exposed parallel or banked raceways shall be run together.
- D. Below grade conduits shall be direct buried between 24 and 30 inches below grade (except, conduits below the building concrete floor slab may be run immediately below the floor) and/or as required to bury conduits below footings, grade beams, etc., and spaced a minimum of 2 inches between conduits.
- E. Below grade conduits shall be direct buried between 24 and 30 inches below grade and spaced a minimum of 2 inches between conduits, except:
 - 1. Conduits below the building concrete floor slab may be run immediately below the floor) and/or as required to bury conduits below footings, grade beams, etc.,
 - 2. Where required to avoid interferences with existing utilities and where rock is encountered, conduit depth may be reduced to 24 inches below grade in roadways and parking areas, and 18 inches below grade elsewhere.
- F. Underground conduits extending into the building and at transformers, panels, etc. shall be suitably sealed or plugged at both ends. Sealant shall be removable. Ductseal is not acceptable.
- G. PVC conduit shall be solvent welded to prevent the entrance of moisture.
- H. Verify location, mounting heights, etc. of surface metal raceways from the Owner and Engineer prior to installation. In general, surface raceways shall be mounted as unobtrusively as possible, tight against whiteboard trim, chair rails, in room corners, against chases, etc. & other breaks in the in the wall or ceiling.
- I. Junction boxes mounted above accessible ceilings shall be within 42 inches of the ceiling and shall have a minimum 12 inch clearance in front of the box.
- J. Raceways shall be located to not interfere with the removal of pipes or equipment for maintenance or repair. All raceways shall be kept a minimum of 6 inches away from items producing heat.

- K. Above grade raceways, fittings, etc. shall be securely supported from permanent structural members of building, either directly or indirectly. Raceways shall be fastened at intervals of 8 feet, nominally, and within 36 inches of each outlet, fitting, panel, etc. Raceway shall be supported using straps, hangers, clips or clamps specifically intended for use as raceway support. Single runs of exposed conduit shall be supported with steel pipe straps.
- L. Bends in raceways shall be made without flattening, kinking or reducing the cross-sectional area of the raceway. Bends in parallel or banked runs shall be made from the same center line so that the bends are parallel.
- M. All raceway cuts shall be made square with a proper cutting tool. The inside and outside of all raceway ends shall be reamed after cutting and/or threading to eliminate burrs and rough edges, then wiped clean. Joints shall be cut square and shall butt solidly into couplings. Running threads will not be permitted.
- N. Surface metal raceways shall be cut with a factory manufactured and/or approved cutting tool designed/made specifically for the purpose.
- O. Raceways shall be closely and tightly fitted in couplings, connectors, boxes, etc. to provide an electrically continuous low resistance ground fault return path. Threaded joints shall be made up with at least 5 threads fully engaged.
- P. The raceway systems shall be complete (including the installation of bushings, grommets, etc.), snaked and cleaned, and approval of the installation is obtained from the Owner and Engineer, before installation of any wallboard where the raceway is concealed in walls and above ceilings.
- Q. The raceway systems shall be complete (including the installation of bushings, grommets, etc.), snaked and cleaned, and approval of the installation is obtained from the Owner and Engineer, before or pulling any cable.
- R. Exposed raceways shall be painted.
- S. Below grade telecommunications, spare, c.o., etc. conduits shall have their location properly marked.

3.02. EXCAVATION AND BACKFILLING

- A. Excavate to depths noted, and as required for proper completion of all below grade work and cut to sufficient size to provide ample room for construction of forms, shoring and bulkheads as required.
- B. Cut existing asphalt, concrete, etc. as required. Push under existing curbs, sidewalks, etc. where possible.
- C. Underground utilities (electrical, water, sewer, cable television, etc.) are known to exist in the area of construction. The location of existing utilities shown on the drawings is approximate only and is not guaranteed to be an indication of all utilities in the area. The contractor is responsible for contacting the Owner and all utility companies and for field location of all utilities prior to construction. The one-call number for underground utility location services is 811 (1-800-424-5555). The Contractor shall promptly notify the Engineer of any conflicts between the contract documents and field location of existing utilities. The Contractor is responsible for maintaining the integrity of all existing utilities during construction.

- D. Damaged electrical and telecommunications (telephone, computer/data, television, fiber, copper, etc.) cables shall be replaced in their entirety. Splicing will not be allowed.
- E. Provide a spotter at all times when excavation occurs by use of a backhoe, excavator or other mechanical equipment.
- F. Shore and brace excavations where necessary to prevent cave-ins and in accordance with all safety laws and codes.
- G. During excavations and backfilling, extreme care shall be taken to keep rocks and other rough material away from conduits and cables. Pack a minimum of 6 inches of soft fill material (free from stones, rocks and other rough material that might be forced against the conduits and cables during backfilling, or when settling or frost-heaving disturbs the surrounding earth) around conduits and cables. Wash in to avoid air gaps.
- H. Backfill shall be good compactable material without large rocks, chunks or sticks. Backfill in all excavations shall be progressively compacted in maximum 12 inch lifts to 95% of maximum density, and shall be without voids.
- I. Prior to excavation, the Contractor shall mark or otherwise show the location of all equipment and vaults, and obtain specific approval from the Owner and Engineer for the location of each prior to installing equipment, boxes, raceways, etc.
- J. Maintain all bench marks, control monuments and stakes, whether newly established by Surveyor or previously existing. Protect from damage and dislocation. If necessary to disturb existing benchmark, re-establish in a safe place.
- K. The clearance between the underground conduit systems and other underground items, such as water and sewer lines shall be as large as necessary to permit maintenance of any of the systems without damage to the other items.
- L. Keep all excavations, pits, trenches, etc., entirely free from water. Protect excavations from rain or water from any source during construction. Use suitable pumping equipment or other means as required by conditions. Continue pumping as necessary until completion of work.
- M. When operations are interrupted by unfavorable weather conditions, prepare areas by grading and compaction to avoid ponding and erosion.
- N. Dirt shall not be permitted to accumulate on roads or adjacent green belts, nor to be washed into drainage ditches.
- O. Appropriate steps, such as the application of water, shall be taken to prevent airborne dust due to the work, particularly during excavation and moving of materials.
- P. Trenches, excavations and any damage to adjoining areas shall be repaired/restored to existing or better condition to the approval of the Owner, Architect and Engineer.

3.03. WARNING TAPES

- A. Direct bury warning tape 12 inches above topmost conduits. For multi-use excavations and trenches, provide multiple tapes. Tapes shall extend into vaults and be stubbed up with and secured to conduits as required for access when tracing or locating.

3.04. LABELING & IDENTIFICATION

- A. Junction boxes concealed in ceiling spaces and exposed in electrical, mechanical, utility rooms, and the like shall be marked with the panel and circuit numbers contained within. Marking shall be legibly hand-written with black indelible ink marker.
- B. In each junction and pull box, neutral conductors shall be grouped with associated phase conductors by taping the conductors together.
- C. Interior spare, C.O., etc. conduits shall be labeled with their destination. Labeling shall be made by neatly hand writing on the conduits or enclosures with indelible marker.
- D. Exterior below grade conduits entering electrical rooms, communications rooms, enclosures, vaults, etc. shall be labeled with their destination. Labeling shall be made by neatly hand writing on the conduits or enclosures with indelible marker.
- E. Color coding for power cable shall be as follows:
 - 1. 120/240 volt, 1 phase, 3 wire:
Phase A = black, B = red, N = white;
 - 2. Equipment ground cables shall be green.
 - 3. Switch legs shall be the same color as the phase conductors. Switch travelers shall be purple.

3.05. BOXES

- A. Boxes shall be installed plumb and true and be firmly supported either directly or indirectly by a sound and safe structural member of the building with approved anchors and fasteners, and shall be readily accessible for maintenance.
- B. Pull boxes or fittings shall be provided in conduit runs as required to prevent excessive stress on the cables during pulling and to allow the minimum required bending radius.
- C. Where an accessible ceiling space exists, locate above the ceiling; otherwise locate in an unobtrusive location to the approval of the Architect, Engineer and Owner.
- D. Pull boxes shall be provided at the transition between the surface metal raceway system and conduit or "open" cabling system. Where an accessible ceiling space exists, locate above the ceiling; otherwise locate in an unobtrusive location against the ceiling.

- E. Flush mounted switch, outlet, etc. boxes in common non-fire rated walls and facing into different rooms shall be offset a minimum of 6 inches to minimize sound transmission between rooms. Flush mounted switch, outlet, etc. boxes in common rated fire resistive walls and facing into different rooms shall be offset a minimum of 24 inches. Boxes mounted back-to-back will not be allowed. Raceways between boxes in adjoining rooms shall be filled as required to maintain the fire rating (where required) and minimize sound and dust transmission between rooms.

3.06. WIRE AND CABLE

- A. All wire and cable shall be enclosed within the raceway system; except:
 - 1. Type MC Cable may be substituted for EMT for branch circuits concealed inside walls and ceilings from junction boxes to devices, luminaires, etc. and between devices. Type MC cable shall not be used for any runs between junction boxes, for homeruns, or be exposed.
 - 2. Type NM Cable (Romex) may be substituted for EMT for branch circuits concealed inside walls and ceilings within the existing building only. Type NM cable shall not be used in the addition portion of the work.
- B. Inspect cable prior to installation to verify that it is identified properly on the reel or box identification label, that it is of proper gauge, containing correct number of pairs, etc. Note any buckling of the jacket which would indicate possible problems. Damaged cable or any other components failing to meet specification shall not be used in the installation.
- C. Conductors of different voltages, systems, functions, etc. shall not be combined in the same raceway or cable unless specifically noted otherwise.
- D. Wire and cable shall not be exposed to weather or mechanical damage longer than necessary. Cut ends of the cable shall be immediately sealed to protect from moisture. Duct tape is not an acceptable means of sealing.
- E. The contractor shall not receive cable from the supplier if it arrives onsite with the cable ends unsealed.
- F. Cable shall be unrolled from reels, or removed from cartons, and installed so as to not damage the insulation or cable sheath and in a manner which will prevent kinking, crushing or excessive tension on conductors and insulation. Use only guides, rollers, sheaves, etc. that are free-turning and clean. Cable shall not be dragged on the ground or over sharp edges or abrasive surfaces. Slack wire shall be provided at all pull points.
- G. All cables to be installed in a raceway shall be pulled together. The pulling means (fish tape, cable, rope, etc.) shall be of a type that will not damage the raceway.
- H. Type MC cable shall be supported and secured by staples, straps, hangars or similar fittings designed and installed so as to not damage the cable. Type MC cables shall be supported at intervals not exceeding 5 feet and within 12 inches of every box, cabinet or fitting.
- I. Type NM cable shall be supported and secured by staples, straps, hangars or similar fittings designed and installed so as to not damage the cable. Type NM cables shall be supported at intervals not exceeding 4 feet and within 12 inches of every box, cabinet or fitting.

- J. All cables shall terminate in an approved enclosure or fitting. Type MC cable shall be terminated at boxes, enclosures, etc. with a non-metallic anti-short bushing and an approved connector, and insure a proper bond by firmly tightening connectors to both the box or enclosure and the cable. The continuity of circuits, grounding, etc. shall not be dependent device connections (e.g. receptacles), where the removal of such devices would interrupt the continuity.
- K. Provide wire/cable markers (Brady type or equivalent/better) identifying its circuit number and/or final destination on all cables/conductors (power, telephone/computer, and other ancillary systems) at panels, devices, junction points, etc.
- L. Cable pulling lubricants shall be used to minimize pulling stresses on cable pulled into raceways.
- M. All cable is subject to subtle damage that may degrade future performance, if abused during installation. In all cable installation, set reels and use sufficient pulleys and manpower so that cables are not pulled around corners or against material that might cause chafing.

OBSERVATION OF IMPROPER CABLING HANDLING TECHNIQUES MAY CAUSE THE CONSULTANT/ENGINEER AND/OR OWNER TO REQUIRE THE CONTRACTOR TO DISCARD AFFECTED CABLES, INCLUDING ANY OTHERS ALREADY INSTALLED BY THE PERSONNEL FOUND USING INCORRECT PROCEDURE.

- N. Conductor connections shall be made with connectors of the proper size and type. Compression connections shall be made with the correct die and number of crimps, or the correct tightening torque in the case of mechanical connectors, according to manufacturer's instructions and recommendations. Use suitable oxide inhibiting joint compound on all aluminum terminations. Termination of insulated conductors shall be made so that the stripped length of bare conductor is not longer than required for the terminal or connector. Care shall be taken to not nick conductors during insulation removal.
- O. Type MC cable shall be cut with an armored cable type rotary cutter. Cable shall be cut square, without sharp edges which could damage the cable insulation.
- P. At pulling points, the cables shall be neatly bundled by circuit.
- Q. Taps and splices shall be kept to a minimum; and are not allowed in cables larger than #8 AWG, control cable, ancillary systems cable, etc. and below grade without prior approval from the Engineer.
- R. Field wiring shall not contact live parts.
- S. Cables shall not be supported by their terminations. Suitable cable ties and/or supports shall be utilized in switchboards, panelboards, terminal boxes, junction boxes, vaults, etc. to group and support conductors. All cable shall be fanned-out to terminals and identified by labels; or, if terminated on circuit breakers or control devices, by typewritten indexes or nameplates.
- T. Insulated cable supports shall be provided to relieve any strain imposed by cable weight or movement, and to secure cable as required to withstand the effects of fault currents.

3.07. CABLE TESTING

- A. Service and feeder cables, including panels with branch circuit breakers open, shall have the insulation resistance to ground measured with other phases grounded after all splices and terminations are made; except, before connection to utilization equipment, fixtures, etc. Test cables phase to phase and phase to ground, with the other phase(s) grounded. Insulation resistance shall be measured using a 500 volt megger, Measure insulation resistance at one minute following the application of the test voltage. The minimum reading shall be 1.0 megohms. Ground each phase at the completion of the test.
- B. Branch lighting and general purpose receptacle circuits do not require an insulation test, functional tests only are required; except, all receptacles shall be tested for correct connection using a suitable receptacle tester.
- C. See specification section 27 05 00 Telecommunications for cable testing.

3.08. PENETRATIONS

- A. Wall, ceiling and floor penetrations by raceways (both inside and outside the raceway), cables, etc. shall be sealed to maintain the original moisture, dust and fire resistance to the approval of the Architect.
- B. Do not cut, notch or drill structural framing members for the installation of raceways without the Architect's approval in each case. Holes and penetrations where allowed in studs, joists and other structural members for raceways and cables shall be of a size to allow for a tight fit.
- C. Provide conduit sleeves as required, plus a spare of the same size, where "open" cable passes through floors, walls, partitions, etc.
- D. Provide sleeves connecting surface metal raceways on opposite sides of walls.
- E. Cut existing surface metal raceway covers on each side of new walls.
- F. Contractor shall x-ray or otherwise determine the exact location of existing structural components, conduits, piping, wiring, ducts and the like prior to making any new penetrations or openings (or expanding existing openings) in any floor, wall or ceiling.

End of Section 26 05 00

SECTION 26 05 26

GROUNDING & BONDING

PART 1 - GENERAL

1.01. APPLICABLE PROVISIONS

- A. The General, Supplementary and other Conditions of the Contract, modifications to the General Conditions, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Division and all its sections.

1.02. SUMMARY

- A. The requirements of this Section and the other Division 26, 27 & 28 Sections apply to all the grounding work.
- B. Coordinate grounding work with related work shown and specified elsewhere.
- C. Provide all materials necessary for the proper execution and completion of the work as herein specified or called for on the drawings. Required items not specifically mentioned in the specifications or indicated on the drawings shall be provided as necessary to produce the intended results.
- D. In the event that any item is not available exactly as specified, the Contractor shall so notify the Engineer in writing as early as possible to allow ample time for an alternate item to be selected without delay to the project.

1.03. SUBMITTALS

- A. Provide submittals for the following:
 - 1. Test method and equipment for system testing.

PART 2 - PRODUCTS

2.01. GROUNDING

- A. Ground clamps, nuts, washers, etc. shall be corrosion resistant high copper alloy or silicon bronze; except, below grade and foundation rebar ground connections shall be exothermic welded (Cadweld or approved equal) or copper compression type.
- B. Ground clamps, nuts, washers, etc. shall be corrosion resistant high copper alloy or silicon bronze; except, below grade ground connections and connections within the Sewer Pump Station wet and dry wells shall be exothermic welded (Cadweld or approved equal) or copper compression type.
- C. Feeder (high voltage and low voltage) circuits, branch circuits, control circuits, etc. shall include a separate equipment ground cable (sized the same as the largest circuit conductor, unless otherwise noted) run in the same raceway with the circuit conductors or bundled with the circuit conductors if run "open". Equipment ground conductors for feeder (high voltage and low

voltage) circuits, branch circuits, control circuits, etc. installed in metallic raceways shall be redundant, consisting of both an electrically continuous metal raceway system and the separate equipment ground cable run in the same raceway with the circuit conductors.

2.02. SWITCHBOARDS AND PANELS

- A. Provide both ground and neutral bars in switchboards and panels (new and existing). All connectors and lugs shall be solderless, pressure type suitable for copper or aluminum wire.

2.03. WIRE AND CABLE

- A. Ground wire and cable sizes indicated and/or specified are minimums only and shall be increased as required due to NEC, system, load, voltage drop, etc. requirements.
- B. Ground electrode conductors shall be copper, bare below grade.
- C. Equipment ground cable shall be single conductor copper with 600 volt type XHHW or THWN/THHN insulation. Conductor size shall match feeder, branch circuit, etc. conductor size unless noted otherwise. Conductors shall be stranded, except #12 AWG lighting and general purpose receptacle branch circuit conductors may be solid.

PART 3 - EXECUTION

3.01. GROUNDING

- A. All electrical equipment, enclosures, boxes, devices, etc. shall be provided with a ground fault return path by means of an insulated grounding conductor installed with the circuit conductors, and the integrity of the raceway system if applicable. Bond raceway system as required.
- B. Ground terminals of all equipment, devices, etc. shall be grounded by the equipment ground conductor.
- C. Raceways shall be closely and tightly fitted in couplings, connectors, boxes, etc. to provide an electrically continuous low resistance ground fault return path. Threaded joints shall be made up with at least 5 threads fully engaged.
- D. Building steel and interior metal piping systems shall be suitably bonded.
- E. Each service shall be grounded to the driven ground rods.
- F. Each service shall be grounded to the concrete encased grounding electrode (foundation rebar). Contractor shall verify that the foundation concrete is in direct contact with earth and is not insulated from contact by a vapor barrier or by moisture sealant paint. Where the concrete reinforcing bars are not suitable for use as a grounding electrode, Contractor shall provide minimum 20 feet of # 4 AWG ground cable encased in the concrete.
- G. Exothermic welded connections shall be done strictly in accordance with manufacturer's instructions, and then enclosed in an air-tight sealing compound to prevent moisture intrusion and minimize corrosion. Molds shall not be altered. All connection materials shall be of the same manufacturer.

- H. Compression connections shall be made with the correct die and number of crimps, or the correct tightening torque in the case of mechanical connectors, according to manufacturer's instructions and recommendations.
- I. Grounding conductors exposed to mechanical damage shall be protected with PVC conduit sleeves with bushings.
- J. Before grounding connections are made, contact surfaces shall be thoroughly cleaned and anti-oxidant solution applied.
- K. Connections shall be both mechanically and electrically secure. Torque connecting hardware in accordance with the manufacturer's instructions and recommendations.
- L. Torque connecting bolts at telecommunications grounding busbars to 35 ft/lbs.
- M. Tests shall be made to verify the continuity of the ground system and all ground fault return paths.
- N. After completion of the grounding system, the resistance of the grounding network to earth shall be measured using a ground megger using a fall of potential test method. Driven ground rods shall be disconnected and tested separately from the grounding system. The minimum ground earth resistance shall be maximum 25 ohms.

End of Section 26 05 26

SECTION 26 07 00

THERMAL & MOISTURE PROTECTION

PART 1 – GENERAL

1.01. APPLICABLE PROVISIONS

- A. The General, Supplementary and other Conditions of the Contract, modifications to the General Conditions, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Division and all its sections.

1.02. SUMMARY

- A. The requirements of this Section and the other Division 26, 27 & 28 Sections apply to all the thermal & moisture protection work.
- B. Coordinate thermal & moisture protection work with related work shown and specified elsewhere.
- C. Provide all materials necessary for the proper execution and completion of the Work as herein specified or called for on the drawings. Required items not specifically mentioned in the specifications or indicated on the drawings shall be provided as necessary to produce the intended results.
- D. In the event that any item is not available exactly as specified, the Contractor shall so notify the Engineer in writing as early as possible to allow ample time for an alternate item to be selected without delay to the project.

1.03. SUBMITTALS

- A. Provide submittals for all moisture, fire and dust stop materials, complete with a description of where each type is proposed to be used.

PART 2 - PRODUCTS

2.01. GENERAL

- A. Coordinate the features of materials and equipment so they form an integrated system.

2.02. MOISTURE PROOFING

- A. Moisture proofing systems shall be designed and installed to allow the passage of cable, conduit or pipe through exterior walls, etc. and vaults. They shall provide a barrier seal to prevent the penetration of water and gases into the structure to be penetrated.
- B. Provide roofing materials recognized to be specifically for use with the type of roofing surface penetrated. Products shall be tested to show compliance with indicated performances, or

provide other similar materials certified in writing by manufacturer to be equal or better than specified in every respect.

2.03. FIRE STOPPING AND SEALING MATERIALS

- A. Fire-stop systems shall be designed and installed to allow the passage of cable, conduit or pipe through fire rated walls or floors. They shall provide a barrier seal to prevent the penetration of fire, smoke, water, and gases, with a fire rating to match the rating of the architectural assembly or structure to be penetrated.
- B. Fire-stop systems shall be resistant to direct hose spray.
- C. Fire-stop systems shall consist of one or more of the following materials:
 - 1. Ablative (typical of silicone-based technology).
 - 2. Cementitious (Can be troweled like grout or mortar, but is specifically rated for the purpose. Grout shall not be permitted).
 - 3. Elastomeric (Flexible substance which resembles rubber).
 - 4. Endothermic (Absorbing heat energy.).
 - 5. Intumescent (Swelling under the influence of heat, pillows, etc.).
 - 6. Mechanical (Assemblies that allow additions or deletions).
- D. Fire-stop systems shall be UL classified for the intended use.
- E. Wall, ceiling and floor sleeves and the like shall be metallic raceways with intumescent bags or bricks; except, at the option of the Contractor, sleeves may be metallic wireways (sized to match the required raceways) which contain an intumescent insert material that adjusts automatically to cable additions or subtractions, Specified Technologies EZ Path, 3M Fire Barrier Pass-Through, or approved equal.
- F. Fire-stop material around cable penetrations, within raceways (except wall and floor sleeves), etc. shall be intumescent bags, bricks, or soft, pliable, non-hardening intumescent putty, with high dielectric strength (insulator). Material shall allow removal of the material(s)/system(s) for future cable additions and/or removals.
- G. Drywall joint compound, concrete, and mineral wool shall not be used as fire stopping materials.
- H. Fire-stop products shall be as manufactured by 3M, Dow Corning, Hilti, Nelson, Specified Technologies, Unique Fire Stop Products, or approved equal.

2.04. DUST SEALING MATERIALS

- A. Dust seal systems shall be designed and installed to allow the passage of cable, conduit or pipe through non-rated ceilings, walls, partitions or floors.

- B. Dust sealant around raceways and the like shall be top grade paintable silicone based or poly-sulfite caulk, or expanding foam type sealant.
- C. Dust sealant around cable penetrations, within raceways, etc. shall allow removal of the material for future cable additions and/or removals.

PART 3 - EXECUTION

3.01. INSTALLATION

- A. Provide all fire-stop sealing for all penetrations through fire-resistance-rated floors, walls and partition construction; including empty openings and openings containing cables, raceways, cable trays, cable racks, sleeves, supports and other penetrating items as required, both new and existing where new cables, raceways and the like have been installed. Contractor is responsible for verifying the fire rating of the barrier to be penetrated.
 - 1. Install fire-stop systems in accordance with manufacturer-tested methods and to manufacturer's instructions. If required, extend fire-stop system through the full thickness of the wall or floor and through the full length of the sleeve.
 - 2. Seal openings with a removable fire-stop material after each shift. Do not leave unattended openings in building fire-resistance-rated walls, partitions and floors at any time during construction.
 - 3. Fire-stopping at penetrations between tunnels and buildings shall include smoke isolation provisions to prohibit smoke migration from one space to the other.
- B. Where existing sleeves or penetrations are re-entered for installation of new cables, Contractor shall modify/re-install or provide new fire stop material as required to maintain the original fire rating of the barrier.

3.02. MOISTURE PROOFING

- A. Conduit terminations at equipment, etc. shall be suitably sealed and/or plugged at both ends to prevent the entrance of moisture.
- B. Underground conduits extending into buildings and at transformers, switchgear, etc. shall be suitably sealed or plugged at both ends. Underground conduits between vaults shall be suitably sealed or plugged at the high end. Sealant shall be removable. Ductseal is not acceptable.
- C. Conduit penetrations through retaining walls and building exterior walls shall be suitably sealed and/or grouted to prevent the entrance of moisture.
- D. PVC conduit shall be solvent welded to prevent the entrance of moisture.

- E. Comply with manufacturer's installation instructions and recommendations particular to each product for all roof penetrations. Repair existing roofing and flashing altered by work, including restoration of base, insulation, membranes, flashing, adhesives, sealants, and roofing accessories integrally related to roof installations. Clean all effected surfaces prior to roofing work. Flash and counter-flash all roof penetrations.

End of Section 26 07 00

SECTION 26 20 00

ELECTRICAL TRANSMISSION

PART 1 - GENERAL

1.01. APPLICABLE PROVISIONS

- A. The General, Supplementary and other Conditions of the Contract, modifications to the General Conditions, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Division and all its sections.

1.02. SUMMARY

- A. The requirements of this Section and the other Division 26, 27 & 28 Sections apply to all the electrical work.
- B. Coordinate electrical work with related work shown and specified elsewhere.
- C. Provide all materials necessary for the proper execution and completion of the work as herein specified or called for on the drawings. Required items not specifically mentioned in the specifications or indicated on the drawings shall be provided as necessary to produce the intended results.
- D. In the event that any item is not available exactly as specified, the Contractor shall so notify the Engineer in writing as early as possible to allow ample time for an alternate item to be selected without delay to the project.

1.03. SUBMITTALS

- A. Provide submittals for the following:
 - 1. Panelboards.
 - 2. Circuit breakers.
 - 3. Surge arrestor.
 - 4. Disconnect switches.
 - 5. Fuses.
 - 6. Meter base.
 - 7. Wiring devices & wallplates.

PART 2 - PRODUCTS

2.01. PANELS

- A. Panels shall be dead-front, circuit breaker type panelboards, suitable for use as service entrance equipment where required. Branch circuits shall be arranged using double row construction. Interiors shall be rigid and so designed that circuit breakers can be replaced, changed or added without disturbing adjacent units and without machining, drilling, or tapping.

- B. Busses shall be copper or tinned aluminum. Ground and neutral bars shall be provided. All connectors and lugs shall be solderless, pressure type suitable for copper or aluminum wire.
- C. Panels shall all be of the same manufacturer, ABB/General Electric, Eaton, Siemens, or Square D, no substitutions.
- D. Circuit breakers shall be bolt-on in panelboards, molded-case, thermal magnetic, quick make-quick break type with trip indicating handles. Branch circuit breakers for motor loads shall be HACR type. Branch circuit breakers for lighting loads shall be SWD type. Multi-pole breakers shall be single-handle, internal common trip. Tandem breakers shall not be used.
- E. Provide padlocking devices on circuit breakers where required.
- F. Provide approved handle ties between single pole circuit breakers for all multiwire branch circuits as required.
- G. Main and/or feeder breakers and branch circuit panels and breakers may be series short circuit rated.
- H. Panels and circuit breakers shall be fully short circuit rated. Series rating of circuit breakers will not be allowed.
- I. Circuit breakers for installation in the existing panelboard(s) shall be of the same manufacturer, and be of a type manufactured specifically for that type, vintage and short circuit rating of the panelboard.
- J. Ground fault protection systems shall include current sensors and all necessary relaying and tripping components. The current sensor shall enclose all phase and neutral conductors. Ground fault relays shall be of solid state design with adjustable pickup and time delay settings, be selectively coordinated between the main and feeder relays, and shall include test provisions.
- K. Spaces shall be bussed for the maximum device that can be fitted into them, and shall be equipped with mounting and connecting accessories for future installation of circuit breakers.
- L. Panels shall be suitable for top and bottom entry of feeder and branch circuit conduits, cables, etc.
- M. Panels shall be industrial/commercial type panelboards with hinged door, catch and lock (all keyed alike). Residential type loadcenters will not be allowed.
- N. Panels and each feeder breaker in each (clearly and accurately identifying the function and location) shall have laminated plastic master nameplates. The panelboard nameplate shall include the name of the panel and the name and location of the equipment from which the power originates.
- O. Panels shall be provided with laminated plastic nameplates to identify the system color coding scheme for phase and neutral conductors as required.
- P. Panels shall be provided with warning nameplates to warn personnel of potential arc flash and shock hazards in compliance with the NFPA 70E standard. Nameplates shall include the voltage system, arc flash boundary limits and PPE category specific to the location.

- Q. Panels shall have a circuit directory frame and card with a transparent cover furnished on the door. Directory cards shall have a typewritten index clearly and accurately identifying the function and location (using the room name and numbering system shown on the Architectural plans) of the circuit. Provide new typewritten circuit directory cards for all existing panels that are modified in any way.
- R. Circuit directory cards shall be arranged to match the physical arrangement of the breakers, with odd numbered circuits on the left side of the card and even numbered circuits on the right side of the card. Where required due to the size of the directory frame, the odd numbered circuits may be on a separate card from the even numbered circuits. Odd and even numbered circuits shall not be intermingled together.

2.02. SEPARATELY MOUNTED CIRCUIT BREAKERS

- A. Circuit breakers shall be molded-case, thermal magnetic, quick make-quick break type with trip indicating handles, suitable for use as service entrance equipment where required. Multi-pole breakers shall be single-handle, internal common trip. Main and/or feeder and branch circuit breakers shall be series short circuit rated. Provide padlocking devices on circuit breakers where required.
- B. Circuit breakers shall be fully short circuit rated.
- C. Where not immediately obvious from its location, circuit breakers shall be identified with laminated nameplates, black face, white core, engraved with minimum $\frac{1}{4}$ inch letters describing its function. The breaker nameplate shall include the name of the breaker and the name and location of the equipment from which the power originates.
- D. Circuit breakers shall be provided with warning nameplates to warn personnel of potential arc flash and shock hazards in compliance with the NFPA 70E standard. Nameplates shall include the voltage system, arc flash boundary limits and PPE category specific to the location.

2.03. DISCONNECT SWITCHES

- A. Disconnect switches shall be heavy-duty, horsepower rated, safety switches, suitable for use as service entrance equipment where required. The switches shall have a handle whose position is easily recognizable, lockable in the OFF position, operable from the front and in control of the disconnecting means with the cover open or closed. The switch position shall be non-teasible, positive, quick make-quick break. Line, load, neutral and ground lugs shall be provided as required. Cable terminals shall be suitable for copper and aluminum wire.
- B. Disconnect switches shall be identified with laminated nameplates, black face, white core, engraved with minimum $\frac{1}{4}$ inch letters describing its function. The disconnect nameplate shall include the name of the disconnect and the name and location (where not immediately obvious from its location) of the equipment from which the power originates.
- C. Disconnect switches shall be provided with warning nameplates to warn personnel of potential arc flash and shock hazards in compliance with the NFPA 70E standard. Nameplates shall include the voltage system, arc flash boundary limits and PPE category specific to the location.

2.04. FUSES

- A. Fuses shall be dual-element, current limiting, rejection type, Class RK-5.
- B. Fuses shall be dual-element, current limiting, rejection type, Class RK-5; except, fuses in the handhole at each light pole shall be Class CC.

2.05. WIRING DEVICES

- A. Wiring devices shall be specification grade, all of the same manufacturer, ivory colored.
- B. Lighting switches shall be toggle, AC quiet type rated 20 amps, 120-277 volt.
- C. Refer to Section 26 50 00 Lighting for occupancy sensing wall switches and low voltage lighting control switches.
- D. Equipment disconnect type switches shall be toggle, heavy duty manual motor controllers, horsepower rated, with the number of poles and ampere rating indicated and/or required.
- E. Fan variable speed switches will be furnished by the Mechanical Contractor, and shall be installed by the Electrical Contractor.
- F. General purpose receptacles shall be tamper resistant, 15 amp, 125 volt, AC, straight blade, 3-wire grounding type; except:
 - 1. Special purpose receptacles as noted for specific equipment.
 - 2. Single receptacles on an individual 20 amp branch circuit shall be rated 20 amps.
- G. Ground fault interrupter (GFI) type receptacles shall be tamper resistant duplex, Class A, 15 amp, 125 volt with end of life protection (either by rendering itself incapable of delivery power or by visual indication) and reverse line-load miswire protection. Provide individual ground fault interrupter type receptacles at each location indicated or as required. Feed-through type protection of multiple outlets will not be allowed.
- H. Tamper-resistant receptacles shall be provided with a mechanism to prevent penetration of small objects into either outlet slot.
- I. Simplex receptacles installed in surface metal raceway systems shall be 2 circuit, alternately wired with grounding conductor, and receptacles at maximum 6 inch spacing, Plugmold GBA series or equal.
- J. Special purpose receptacles shall be of the type, ratings and design for the use intended, NEMA configuration. Provide matching plugs where indicated.
- K. Flush mounted devices shall have smooth specification grade high abuse nylon wallplates, color to match devices.
- L. Surface mounted devices shall have raised surface type covers, galvanized steel.
- M. Weather-proof devices (other than receptacles) shall be equipped with stainless steel or cast metal covers and spring-loaded gasketed doors.

- N. Weather-proof receptacles shall be equipped with heavy duty die cast while-in-use covers. Covers shall maintain a weatherproof rating whether or not an attachment plug is inserted. Intermatic WP3110MXD series, or approved equal.
- O. Definite purpose devices shall be labeled with a description of the device's function, rating and circuit identification.
- P. All outlets shall be labeled with the panel and circuit number(s) from which the device is fed. Labels shall be heavy duty adhesive type, clear with black letters on light colored devices and clear with white letters on dark colored devices. Lettering shall be appropriately sized for the application, except minimum $\frac{1}{4}$ inch. Labels on ceiling mounted devices shall be large enough to read from the floor. Labels shall be as manufactured by Kroy, Brothers, or approved equal. Self-adhesive circuit numbers, masking tape, plastic punch type "Dymo" labels, etc. are not acceptable.

2.06. EQUIPMENT IDENTIFICATION

- A. Provide nameplates for all equipment and other devices used for the control of circuits, equipment, etc. Include the panel and circuit number(s) from which it is fed.
 1. Switchboards and each feeder circuit breaker within each.
 2. Panelboards and each feeder circuit breaker within each.
 3. Motor starters, contactors, etc.
 4. Disconnect switches.
 5. Control and contactor panels, and each device within each.
 6. Control stations and their devices.
- B. All distribution equipment (switchboard, panelboards, motor control centers, etc.) shall be provided with laminated plastic nameplates to identify the system color coding scheme for phase and neutral conductors as required.
- C. All distribution equipment (switchboard, panelboards, motor control centers, etc.) shall be provided with warning nameplates to warn personnel of potential arc flash and shock hazards in compliance with the NFPA 70E standard. Nameplates shall include the voltage system, arc flash boundary limits and PPE category specific to the location.
- D. Definite purpose devices shall be labeled with a description of the device's function, rating and include the panel and circuit number(s) from which it is fed.
- E. All equipment and outlets shall be labeled with the panel and circuit number(s) from which it is fed.
- F. Labels shall be heavy duty adhesive type, clear with black letters on light colored devices and clear with white letters on dark colored devices. Lettering shall be appropriately sized for the application, except minimum $\frac{1}{8}$ inch. Labels on ceiling mounted devices shall be large enough to read from the floor. Labels shall be as manufactured by Kroy, Brothers, or approved equal.

Self-adhesive circuit numbers, masking tape, plastic punch type "Dymo" labels, etc. are not acceptable.

- G. Nameplates shall adequately describe the function or operation of the identified equipment, devices, etc. and, where applicable, include the panel and circuit number(s) from which it is fed. Nameplate designations shall be consistent with the project documents. Submit proposed inscriptions for approval.

PART 3 - EXECUTION

3.01. TEMPORARY POWER

- A. The Contractor shall provide all temporary power services, facilities, equipment, devices, material, etc. required for the construction; including adequate lighting, outlets, balancing, testing, etc. as may be necessary for the proper performance and inspection of the work.
- B. During power interruptions, and if Contractor's equipment will not operate on the available power, the contractor shall supply all equipment needed, such as transformer(s), generator(s), etc. and pay all costs involved.
- C. The temporary power system shall be provided in a neat and safe manner, in compliance with governing codes and good working practice.
- D. Permanent receptacles which are used for temporary power during construction shall be replaced with new devices at the completion of construction.
- E. The temporary power system shall be removed when no longer required.

3.02. LOCATIONS

- A. The mounting heights and location of similar equipment and devices shall be consistent, in accordance with the requirements of the ADA where applicable. Special purpose items shall be located conveniently for the purpose intended.
- B. Devices shall be located to not interfere with the removal of pipes or equipment for maintenance or repair. All devices shall be kept a minimum of 6 inches away from items producing heat.
- C. Disconnect switches, circuit breakers, etc. shall, in no case, be installed so that the grip of the operating handle, when in its highest position, is more than 6¹/₂ feet above the floor or working platform.
- D. Outlets (power, telecommunications, etc.) shall be mounted 18 inches to centerline above finished floor unless noted otherwise; except, outlets above counters, etc. shall be mounted 6 inches to centerline above the counter or 3 inches to centerline above the splashboard, whichever is higher.
- E. Locate light switches, etc. 6 inches from door casings (except on center in spaces less than 12 inches), 46 inches to centerline above finished floor. Where light switches are adjacent to countertops, install the switches at the same height as adjacent devices above the countertop.

- F. Prior to rough-in, the Contractor shall mark or otherwise show the location of all equipment and devices, and obtain specific approval from the Owner and Architect for the location of each prior to installing enclosures, boxes, raceways, etc.

3.03. EQUIPMENT AND DEVICES

- A. Equipment, devices, enclosures, etc. shall be installed plumb and true and shall be square with the adjacent walls, ceilings and structural members.
- B. Equipment, cabinets, boxes, etc. shall be accurately mounted and leveled and be firmly supported either directly or indirectly by a sound and safe structural member of the building in accordance with manufacturer's instructions, or as directed. Supports shall be neatly placed and properly fastened.
- C. Where multiple 3-way switches are ganged together, the switches shall be arranged so that all of the switches are in the same up or down position when all the fixtures in the space are on. The corresponding switches at the opposite end of the circuit shall also be all in the up or down position.
- D. The correct lifting, jacking and/or moving gear which will prevent damage to the equipment shall be used.
- E. Bolts, nuts, screws and other fastenings shall be tightened and all covers replaced on equipment and boxes. Electrical connections, particularly those on bus work in panelboards, etc. shall be checked to ensure tightness and electrical conductivity. Gaskets, seals, etc. shall be checked for proper fit.
- F. To minimize transformer noise, provide rubber sound isolation pads between the transformer enclosure and the floor. Back off nuts as directed at sound isolation pads, both internal and external, to float transformer on the isolation pads.
- G. Follow manufacturer's installation details wherever available. Provide boxes, mountings, wiring or fittings required, standard or special.
- H. The Contractor shall touch-up paint all scratched, marred or damaged factory finish on equipment, devices, enclosures, etc.

3.04. DEVICES

- A. Flush mounted switch, outlet, etc. boxes in common non-fire rated walls and facing into different rooms shall be offset a minimum of 6 inches to minimize sound transmission between rooms. Flush mounted switch, outlet, etc. boxes in common rated fire resistive walls and facing into different rooms shall be offset a minimum of 24 inches. Boxes mounted back-to-back will not be allowed. Raceways between boxes in adjoining rooms shall be filled as required to maintain the fire rating (where required) and minimize sound and dust transmission between rooms.
- B. Low voltage cut-in type mounts in a common wall and facing into different rooms shall be offset a minimum of 12 inches and shall be separated by a stud. Area between low voltage cut-in type mounts without boxes shall be filled with insulation or other suitable material to minimize sound and dust transmission between rooms.

3.05. TESTING

- A. Before testing, visually inspect equipment thoroughly, and perform mechanical operation and key interlock tests in accordance with manufacturer's instructions.
- B. Before energization, test all equipment in accordance with manufacturer's recommendations; except minimum as described below.
- C. Insulation Resistance Tests:
 - 1. Test using a 500 VDC or 1000 VDC megohmmeter.
 - 2. Ground all phases not being tested.
 - 3. Measure insulation resistance at one minute following the application of the test voltage.
 - 4. Ground each phase at the completion of the test.
- D. Compare test results with factory-obtained results and results on similar equipment. Investigate variations. Consult manufacturer for recommendations.
- E. Upon completion, all equipment and systems shall be tested for functional operation, including all intended modes and sequences of operation.
- F. Record the values of each test, along with the description of the instrument, voltage level, temperature, time, and date of the test on the form included in the contract documents. Sign the results.

End of Section 26 20 00

SECTION 26 32 13

ENGINE/GENERATOR & AUTOMATIC TRANSFER SWITCH

PART 1 - GENERAL

1.01. APPLICABLE PROVISIONS

- A. The General, Supplementary and other Conditions of the Contract, modifications to the General Conditions, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Division and all its sections.

1.02. SUMMARY

- A. The requirements of this section and the other Division 26, 27 & 28 sections apply to all the engine-generator set & automatic transfer switch work.
- B. Submit Substitution Request to reach Architect's office before 5:00 PM at least ten (10) working days prior to date for receiving Bids, and in conformance with Instructions to Bidders.
- C. Coordinate engine-generator and automatic transfer switch work with related work shown and specified elsewhere.
- D. Provide all necessary equipment, devices, materials and appurtenances necessary for proper operation. Required items not specifically mentioned in the specifications or indicated on the drawings shall be provided as necessary to produce the intended results.
- E. Where required by WAC 173-400-930, apply and pay for a permit with the local air authority.
- F. Provide all testing and training.
- G. Provide full tank of fuel. Refill to full level after testing.
- H. In the event that any item is not available exactly as specified, the Contractor shall so notify the Engineer in writing as early as possible to allow ample time for an alternate item to be selected without delay to the project.

1.03. SUBMITTALS

- A. Provide submittals for the engine-generator set, automatic transfer switch, fuel tank, exhaust system and all appurtenances.
- B. Provide calculations to support that proposed engine-generator sets configuration will start and run loads as specified.

PART 2 - PRODUCTS

2.01. GENERAL

- A. Coordinate the features of materials and equipment so they form an integrated system.
- B. Engine-Generator Set, Automatic Transfer Switches and all appurtenances shall be manufactured, tested, and shipped by a single supplier, who is a local (not more than 125 miles from site and within the United States) authorized distributor that can provide 24 hour service with factory trained personnel, a required stock of replacement parts, and technical assistance.
- C. The engine-generator set and automatic transfer switch shall be suitable for use as an emergency and legally required standby power system in accordance with the NEC; and meet the specifications, prototype tests, one-step full-load pickup, and installation acceptance requirements of NFPA 110.
- D. Engine-generator set, automatic transfer switch and all associated equipment, devices, materials, etc. shall be UL (Underwriter's Laboratories, Inc.) listed, labeled and approved for the service intended where UL standards have been established. If no UL label is available, the label of a testing agency or conformance to national standards recognized and approved by the authority having jurisdiction is required.
- E. All equipment, devices, etc. and their components shall be designed for continuous duty without degradation of function or performance.
- F. Provide concrete pad sized per manufacturer's instructions.
- G. Brace all equipment, devices, etc. as required to meet the requirements of seismic zone 3.
- H. Lifting eyes and jacking pads shall be provided.

2.02. WARRANTY

- A. The engine-generator sets, automatic transfer switch and all appurtenances shall be warranted for a period of 5 years or 1,500 operating hours (whichever occurs first) from the date of initial start-up. Multiple warranties for individual components (engine, generator, controls, fuel tank, etc.) will not be acceptable.
- B. For warranty purposes, the date of final completion/acceptance by the Snohomish County Fire Protection District #17 Commissioners shall be considered the date of final acceptance of the installation by the Owner certified in writing. Corrective work, if needed and requested by the Owner, shall be provided without cost to the Owner during the warrantee period.
- C. All corrective work performed by the Supplier in remedying defective work during the warrantee period following the Owner's acceptance of the project shall be subject to the same warrantee requirements of the original work for a period as specified from the date of completion of the corrective work.
- D. Corrective work shall include on-site service by the supplier and/or nearest technical service representative of the equipment manufacturer. Service shall be provided within 24 hours from the time of request for warranty service by the Owner.

2.03. ENGINE-GENERATOR SET

- A. Engine-Generator Set shall be Cummins, Detroit Diesel, Kohler, or approved equal, diesel fueled, 1800 rpm, 1 phase, 3 wire, 60 hertz, re-connectable (initially connected 120/240 volt); rated minimum 133 KW, 133 KVA at 0.8 PF on a prime (105°C) basis and minimum 144 KW, 144 KVA at 0.8 PF on a continuous standby basis (130°C).
- B. Engine-Generator Set shall meet or exceed the latest local, NWAPA and EPA standards and requirements for noise, emissions and opacity.
- C. Engine-Generator Set shall be permanently mounted, outdoors, with weather protective and sound attenuated enclosure, sub-base fuel tank, vibration isolators, heavy duty steel base, exhaust muffler, etc. Finish shall be manufacturer's standard.
- D. Performance:
 - 1. Engine-generator set shall, when operating under full load, provide a sound level no greater than 75 dba at any location 23 feet from the engine-generator set.
 - 2. Voltage regulation shall be $\pm 1.0\%$ of rated voltage for any constant load between no load and full rated load.
 - 3. Frequency regulation shall be 5% maximum from no load to full load under varying loads.
 - 4. Random voltage variation under steady-state load conditions shall not exceed $\pm 1.0\%$.
 - 5. Random frequency variation under steady-state load conditions shall not exceed $\pm 0.5\%$.
 - 6. Total harmonic distortion from no load to full linear load shall not exceed 5% of rated voltage, and no single harmonic shall exceed 3% of rated voltage.
 - 7. Telephone influence factor shall be less than 50. Telephone harmonic factor shall be less than 3.
 - 8. Engine-generator set shall be capable of starting minimum 144 KW in one step (per NFPA 110), and minimum 440 motor starting KVA, with a instantaneous voltage drop of no more than 35% as defined by NEMA MG 1.
- E. Engine
 - 1. Engine shall be stationary, liquid-cooled, diesel for use with number 2 diesel fuel. Design shall be 4 cycle, 6 cylinders (with 2 valves per cylinder), minimum 415 cubic inch, minimum 237 HP, 1800 rpm, turbocharged and intercooled if required. Cylinder block shall be cast iron with replaceable wet liners. Crankshaft and connecting rods shall be forged steel. Engine shall be capable of driving the generator on a continuous standby basis for the duration of any utility source interruption. Fuel injection and valves shall not require adjustment while in service.

2. Engine shall be cooled by a skid mounted, closed loop radiator system; including centrifugal fan, coolant pump(s) and thermostatic temperature control. The coolant system shall be rated for full load operation up to 50°C ambient conditions. The cooling system components and cooling air flows shall be designed to minimize noise.

F. Engine Components/Accessories:

1. Electric starter(s) as required, battery driven, capable of minimum 3 cranking cycles without overheating, before over-crank shutdown.
2. Starting batteries (2 each for 24 VDC starting system) shall be rack mounted inside Engine-Generator Set housing and/or base rails. Batteries shall be heavy duty lead acid type with standard top-post connections. Battery cables shall be flexible "welder" type, length and size as required, with standard connectors crimped and sweat soldered at each end. Positive cables shall have red "heat shrink insulation" installed at each termination.
3. Battery charging alternator with solid-state voltage regulator.
4. Positive displacement, mechanical full pressure lubrication oil pump, lubrication oil as required, full flow lubrication oil filters with replaceable elements, dipstick oil level indicator, high quality ball type manual lube oil drain valve to minimize possible leakage, and a quick connect fitting.
5. Oil pressure sensor with normally open contact which closes on oil pressure rise.
6. Fuel filter and water separator, automatic electric fuel shutoff, and an engine driven mechanical positive displacement fuel injection pump, capable of providing sufficient lift and capacity to transfer fuel from the sub-base fuel tank.
7. Dry element air cleaner with filter and restriction indicator.
8. Electronic speed governing system to provide isochronous Engine-Generator Set frequency control.
9. Protection devices with sensing elements to initiate high and low coolant temperature, low lubrication oil pressure, over-speed, over-crank, etc. alarms and shutdowns.
10. Water jacket heater, thermostatically controlled, 120 volt.

G. Generator:

1. Generator shall be single pre-lubricated sealed bearing, self-aligning, four-pole, synchronous, revolving field type, drip-proof construction; with amortisseur windings and direct drive centrifugal blower. Generator shall be directly connected to engine flywheel housing and driven through a flexible coupling to insure permanent alignment. The rotor shall be dynamically balanced. The armature shall have skewed laminations and two-thirds pitch windings. Generator design shall prevent potentially damaging shaft currents.
2. Insulation system shall be Class H, minimum. Actual temperature rise shall not exceed 105°C at prime rating and 130°C at standby rating, at 40°C ambient.

3. Generator shall be 3 phase, broad range, re-connectable, with 12 leads brought out to allow connection by user to obtain any of the available voltages for the unit.
4. Voltage regulator shall be asynchronous, pulse width modulated design, temperature compensated, torque-matched to the engine. Voltage regulator shall be insensitive to severe load induced waveform distortion from SCR, thyrister, etc. circuits.
5. A permanent magnet generator shall provide excitation power to the automatic voltage regulator. The permanent magnet generator shall sustain main field excitation power for optimum motor starting, and to sustain short circuit current.
6. Exciter shall be three-phase, full-wave rectified, with heavy-duty silicon diodes mounted on the rotor shaft and sized for maximum motor starting loads.
7. Shield generator, exciter, voltage regulator, etc. to prevent radio frequency interference.

H. Fuel System:

1. Engine fuel supply and return lines shall be pre-plumbed, with flexible sections.
2. Provide full tank of fuel. Refill to full level after testing.

I. Fuel Tank:

1. Fuel tank shall be UL142 listed, sub-base style. Tank shall be corrosion resistant steel, double wall construction, pressure tested, complete with gauges, valves, fill and vent fittings, etc.
2. Normal vent shall be piped up to 12' above grade. Emergency and containment vents shall be installed as required by the local AHJ with pipes routed up to 12' above grade, if required.
3. Fuel tanks shall be provided with valves, hose connection and pump for connection and filling from a separate adjoining fuel tank and/or tanker.
4. Fuel filling opening shall be provided with a 5 gallon spill containment, liquid tight cap and manual drain.
5. Overfill prevention shall be set at 95% of tank capacity and an audible alarm shall notify fuel level of 90% of tank capacity.
6. Engine fuel supply and return lines shall be pre-plumbed, with flexible sections.
7. Fuel tank shall be provided with high and low fuel level alarm switches (interlocked with pump station monitoring system), and an overfill alarm switch (to sound a warning bell).
8. Fuel tank shall be provided with a level transmitter to provide a 4 - 20 milliamp signal to the pump station monitoring system.
9. Capacity: minimum 300 usable gallons.

10. Fuel will be provided by the Owner.
11. Provide full tank of fuel. Refill to full level after testing.

J. Enclosure:

1. Engine-generator enclosure shall be a weather-protective and sound attenuated housing. Sound level shall not exceed 75 dba at any location 23 feet from the engine-generator set when operating under full load.
2. Housing shall be heavy gauge reinforced sheet steel with sound dampening material, attached the Engine-Generator Set mounting base and radiator cowling. The housing shall have hinged access doors as required to maintain easy access for all operating and service functions. All doors shall be lockable, and include retainers to hold the door open during service. Enclosure roof shall be cambered to prevent rainwater accumulation. Openings shall be screened to limit access of rodents into the enclosure.
3. Sheet metal shall be primed for corrosion protection and finish painted with the manufacturer's standard color using a two step electro-coating paint process, or equal. Surfaces of all metal parts shall be primed and painted. Hardware and hinges shall be stainless steel. Fasteners used shall be corrosion resistant.
4. All electrical power and control interconnections shall be made within the perimeter of the enclosure.
5. Coolant and lubricating oil drain lines shall be extended to the exterior of the enclosure, with internal drain valves. Radiator shall have provision for filling from the exterior of the enclosure.
6. Provide lifting brackets as required.

K. Mounting:

1. Engine-Generator Set shall be mounted with vibration isolators on a heavy-duty steel base.
2. Anchor bolts, ASTM A307 steel, hot dipped galvanized, and with a 3 inch diameter hook at the embedded end. Size and quantity as required, with embedment no less than 6 inches.
3. Provide concrete pad sized per manufacturer's instructions.

L. Exhaust:

1. Exhaust system shall meet or exceed the latest local, Northwest Clean Air Agency and EPA standards and requirements for emissions and exhaust tier requirements.
2. Exhaust muffler shall be of the critical type providing minimum 25 – 35 dB(A) noise attenuation, end or side entry as required, connected to the engine with a flexible exhaust pipe section (length as required to take up thermal expansion and generator set vibration,

except minimum 24 inches) and a rain cap at the stack outlet. Exhaust muffler shall include a condensate drain.

3. Muffler and exhaust piping shall be thermally protected.
4. Exhaust system noise level shall not exceed 60 dba at 100 feet.

M. Main Output Circuit Breaker:

1. Main output circuit breaker(s), mounted at an accessible location within the engine-generator set housing, shall be provided on engine-generator set.
2. Circuit breaker shall be molded-case, thermal magnetic, quick make-quick break type with trip indicating handles, suitable for use as service entrance equipment where required. Multi-pole breakers shall be single-handle, common trip.
3. Circuit breaker shall be micro based type (molded-case, thermal magnetic will not be allowed), selectively coordinate with the building switchgear, be of the same manufacturer as the building switchgear, quick make-quick break type with trip indicating handles, suitable for use as service entrance equipment where required. Multi-pole breakers shall be single-handle, common trip. Generator supplier shall coordinate with contractor and building switchgear supplier's selective coordination study and provide circuit breaker as required.
4. Circuit breaker shall be suitable for use as service entrance equipment.

N. Engine-generator set shall include a lighted, unit mounted dead-front factory built, wired, tested, and shock-mounted control panel; including, as a minimum, the following functions and devices:

1. Capability of being started automatically from the remote automatic transfer switch.
2. Oil pressure gauge, coolant temperature gauge, charge rate ammeter and running time meter.
3. Voltmeter, ammeter and frequency meter; with selector switch(es) as required to allow meter displays of each generator phase.
4. Manual selector switch: RUN-STOP-REMOTE
5. Field circuit breaker.
6. Automatic engine shut down for over-crank, over-speed, low oil pressure, and high engine temperature fault conditions.
7. Indicator lamps to signal Run, Switch Off (flashing) plus each engine fault and pre-fault alarm condition, in accordance with NFPA 110.
8. Fault reset switch to clear fault indications and allow restarting of the engine after shut down faults.

9. Indicator lamps to signal Run, Switch Off (flashing) plus each engine fault and pre-fault alarm condition, in accordance with NFPA 110; except minimum as follows:
 - a. Low oil pressure (alarm)
 - b. Low oil pressure (shutdown)
 - c. Low coolant temperature (alarm)
 - d. High coolant temperature (alarm)
 - e. High coolant temperature (shutdown)
 - f. Low coolant level (alarm or shutdown--selectable)
 - g. Fail to crank (shutdown)
 - h. Fail to start/overcrank (shutdown)
 - i. Overspeed (shutdown)
 - j. Low DC voltage (alarm)
 - k. High DC voltage (alarm)
 - l. Weak battery (alarm)
 - m. Battery charger AC failure
 - n. Low fuel level
 - o. Low fuel shutdown
 - p. High AC voltage (shutdown)
 - q. Low AC voltage (shutdown)
 - r. Under frequency (shutdown)
 - s. Over current (warning)
 - t. Over current (shutdown)
 - u. Short circuit (shutdown)
 - v. Ground fault (alarm)
 - w. Over load (alarm)
 - x. Emergency stop (shutdown)

10. Fault reset switch to clear fault indications and allow restarting of the engine after shut down faults.

11. Control relays as required with dry, form C output contacts rated minimum 300 volt, 10 amps shall signal:
 - a. Generator running and ready to load
 - b. Generator not in Auto
 - c. Common alarm
 - d. Overload or underfrequency for more than 5 seconds (load dump)
 - e. Overcrank shutdown
 - f. Overspeed shutdown
 - g. Battery charger AC failure
 - h. High battery voltage alarm
 - i. Low battery voltage alarm
 - j. Low fuel alarm
 - k. Low oil pressure warning
 - l. Low oil pressure shutdown
 - m. Low coolant level alarm
 - n. Low coolant temperature alarm
 - o. High coolant temperature alarm
 - p. High coolant temperature shutdown

- O. Engine-generator set accessory equipment shall include, as a minimum, the following:
1. Voltage regulated battery charger, equipped with float, taper, and equalize charge settings. (Note that at the option of the supplier, the battery charger may be located either in the automatic transfer switch or within the engine-generator set housing.)
 2. Guards as required to prevent accidental contact with rotating parts.
 3. Isolation pads.
 4. Steel spring type vibration isolators shall be provided between the engine-generator set and the sub-base style fuel tank.
 5. Flexible duct connector as required to connect the radiator to the exhaust louver.
 6. Touch-up paint as required for all scratched, marred or damaged factory finish on equipment, devices, enclosures, etc.

2.04. AUTOMATIC TRANSFER SWITCH

- A. Transfer switches shall be automatic, Onan type OTCB, Kohler type KCP, or approved equal, rated to carry 100% rated current continuously.
- B. Automatic transfer switches shall be suitable for use as an emergency and legally required standby power system in accordance with the NEC; and meet the specifications, prototype tests, one-step full-load pickup, and installation acceptance requirements of NFPA 110.
- C. Transfer switch shall be 120/240V single phase, 600 amp rated.
- D. Transfer switches shall be contactor type, over center operation, double-throw construction, positively electrically and mechanically interlocked, mechanically held in both normal and emergency positions, quick make-quick break type with a center "programmed transition" (adjustable from 0 - 7.5 seconds) position during switching in both directions, when the load is isolated from both the normal and emergency sources.
- E. Electric operating means shall be a direct-acting, constant force in both directions, attached to the switching mechanism without the use of gears, cams, or other complex mechanical linkage methods. The transfer switch shall not contain any integral overcurrent devices in the main power circuit. The transfer switch electrical actuator shall have an independent disconnect means to disable the electrical operation during manual switching.
- F. Transfer switches shall be mounted in a separate surface (wall) mounted, dead front, NEMA 1 enclosure with key locking door, protective covers inside the enclosure to protect operating personnel during manual operation and to allow an operator to visually determine whether the main contacts are open or closed.
- G. Main switch contacts shall be of the no maintenance type, resistant to burning and pitting. Switch shall have arc chutes of heat resistant material and metal leaves for positive extinguishing of arcs quickly and effectively. Arc chutes shall have insulating covers to prevent interphase flashover.

- H. Cable lugs, suitable for both top and bottom feed, shall be provided for normal, emergency, and load positions. Separate full rated neutral and ground bars with lugs for normal, emergency, and load positions shall be provided.
- I. Controls with the following features and/or functions shall be provided:
 - 1. Control accessories, electronic and/or relay, shall be mounted in a separate compartment inside of the main cabinet.
 - 2. Control circuit disconnects shall be provided to de-energize the control circuits.
 - 3. Electronic control, undervoltage and time delay modules shall be printed circuit boards for ease of service. Undervoltage sensors shall simultaneously monitor all phases of the normal and emergency power sources. Voltage pickup settings shall be adjustable from 85% to 100% of nominal voltage. Voltage dropout settings shall be adjustable from 74% to 98% of the pickup setting with a fixed dropout delay of 0.5 seconds. Voltage sensors shall be of the temperature compensated type. Voltage sensors shall allow for adjustment to sense partial loss of voltage on any phase of the normal or emergency power sources, even where motor feedback voltages exist.
 - 4. Controls shall signal the emergency power system to start upon a signal from the normal source voltage sensors. Time delay (adjustable) start shall avoid nuisance start-ups on momentary voltage dips or interruptions. The transfer switch shall transfer the load to the emergency power system after the engine-generator set reaches proper voltage and frequency and has stabilized, within 10 seconds after a normal source power failure; and shall retransfer the load to the normal source after the normal source is restored and stabilized. The controls shall signal the engine-generator set to stop after load retransfer to the normal source, but shall maintain the availability of the emergency source in the event the normal source fails shortly after retransfer; except controls shall allow the engine-generator set to run unloaded for a cooldown period prior to shutdown.
 - 5. Controls shall provide an automatic retransfer of the load from the emergency source to the normal source if the emergency source fails when the normal source is available.
 - 6. Transfer switch operating power shall be obtained from the source to which the load is being transferred.
 - 7. Status indicators shall be provided indicate the sequence of control functions.
 - 8. Control relays as required with dry, form C output contacts rated minimum 300 volt, 10 amps shall signal:
 - 9. Normal source power failure,
 - 10. Generator alarm,
 - 11. Generator run,
 - 12. Generator failure.
 - 13. Main cabinet front door mounted controls and indicator lamps shall consist of oil-tight, position indicator lamps and key operated Test and Selector Switches to provide Test-Normal-Retransfer functions.

J. Accessories shall include the following:

1. Meters, with a single switch, to monitor the automatic transfer switch output voltage, current and frequency on each phase; mounted in the cabinet front door, and readable without opening the door.
2. An exerciser clock to set day-of-week (1 week dial minimum), time-of-day, and duration-of-time of engine-generator set exercise.
3. Voltage regulated battery charger, equipped with float, taper, and equalize charge settings. (Note that at the option of the supplier, the battery charger may be located either in the automatic transfer switch or within the engine-generator set housing.)

2.05. REMOTE EMERGENCY SHUTDOWN BUTTON

- A. Emergency shutdown button and box shall be surface mounted, weatherproof, red painted steel enclosure with glass protective cover with steel hammer for glass break. Provide engraved nameplate indicating its function.
- A. Enclosure shall be suitable for use in wet locations, NEMA 3R minimum, with weatherproof cover plate.
- B. Mount button on the exterior of the sound enclosure.

2.06. CONTROL STATIONS AND DEVICES

- B. Pushbuttons, selector switches, potentiometers, indicating lights, etc. shall be heavy-duty oil-tight type. Contacts shall be rated minimum 300 volt, 10 amp AC and DC continuous. Indicating lights shall be provided with the lens color indicated. 120 volt (and higher) indicating lights shall be transformer type. Control devices shall be Allen-Bradley Bulletin 800T or approved equal.
- C. Terminal blocks, clamp or screw type, shall be provided for all external wires entering control stations, etc. where suitable terminals are not available on the devices. Control wires shall not be spliced or tapped using wire nuts.
- D. Each device shall have a suitable legend plate.
- E. Control stations, etc. shall be identified with laminated plastic nameplates, black face, white core, engraved with minimum $\frac{1}{8}$ inch letters describing its function.

2.07. GENERATOR STATUS PANEL

- A. Generator status panel shall be remote, flush mounted with audible/visible alarms for generator malfunction, alarm silence button and annunciator lamps for each engine fault and pre-fault alarm condition, in accordance with NFPA 110.

2.08. EQUIPMENT IDENTIFICATION

- A. Provide nameplates for all equipment and other devices used for the control of circuits, equipment, etc.
- B. Engine-generator set enclosure doors where the circuit breakers and control panels are located.
- C. Circuit breakers.
- D. Automatic transfer switch.

PART 3 - EXECUTION

3.01. LOCATIONS

- A. The mounting heights and location of similar equipment and devices shall be consistent, in accordance with the requirements of the ADA where applicable. Special purpose items shall be located conveniently for the purpose intended.
- B. Prior to rough-in, the Contractor shall mark or otherwise show the location of all equipment and devices locations, and obtain specific approval from the Owner and Architect for the location of each prior to installing enclosures, boxes, raceways, etc.
- C. Transfer switches, circuit breakers, etc. shall, in no case, be installed so that the grip of the operating handle, when in its highest position, is more than 6¹/₂ feet above the floor or working platform.

3.02. EQUIPMENT AND DEVICES

- A. Equipment, enclosures, etc. shall be installed plumb and true and shall be square with the adjacent walls, ceilings and structural members. The location of similar items shall be consistent.
- B. Equipment, cabinets, boxes, etc. shall be accurately mounted and leveled and be firmly supported either directly or indirectly by a sound and safe structural member of the building in accordance with manufacturer's instructions, or as directed. Supports shall be neatly placed and properly fastened.
- C. The correct lifting, jacking and/or moving gear which will prevent damage to the equipment shall be used.
- D. All bolts, nuts, screws and other fastenings shall be tightened and all covers replaced on equipment and boxes. Electrical connections shall be checked to ensure tightness and electrical conductivity. Gaskets, seals, etc. shall be checked for proper fit.
- E. Follow manufacturer's installation details wherever available. Provide all boxes, mountings, wiring or fittings required, standard or special.
- F. Brace all equipment, etc. as required to meet the requirements of seismic zone 3.

- G. Attach to wood with wood or lag screws, to metal with machine screws or bolts and to concrete with carbon steel wedge or sleeve type expansion anchors or self-drilling metal anchors and machine screws or bolts.
- H. Provide concrete pad sized per manufacturer's instructions.
- I. Pad mounted equipment shall be secured with suitable hot dipped galvanized steel anchor bolts, washers, hex nuts, etc.
 - 1. Engine-generator set anchor bolts size and location shall be as directed by engine-generator set supplier.
 - 2. Engine-generator set anchor bolts shall be ASTM A307 steel and shall have a 3 inch diameter hook at the embedded end. Embedment shall be no less than 6 inches.
- J. The Contractor shall touch-up paint all scratched, marred or damaged factory finish on equipment, devices, enclosures, etc.

3.03. VIBRATION ISOLATION

- A. Wiring connections to the engine-generator set shall be with stranded conductors installed in flexible conduit, minimum 18 inches long.
- B. Provide flexible lengths of fuel line and exhaust piping as required to take up engine-generator set movement and vibration.

3.04. TESTING

- A. Engine-generator set shall have been tested as complete units on representative engineering prototype models as required by NFPA 110. The tests must not be performed on equipment to be sold, but on separate prototype models, and their accomplishment certified by means of documentation of the tests accompanying submittal data. These tests shall have included:
 - 1. Maximum power level (maximum KW).
 - 2. Maximum motor starting capacity (maximum KVA) and voltage dip recovery within 7 cycles of applied load.
 - 3. Structural soundness (Short-Circuit and Endurance Tests).
 - 4. Torsiograph Analysis.
 - 5. Engine-generator cooling air flow.
 - 6. Transient response, steady-state speed control and voltage regulation.
 - 7. Generator temperature rise.
 - 8. Harmonic analysis and voltage waveform deviation.

9. Failure mode test for voltage regulator.
 10. Endurance test.
- B. Before shipment, engine-generator set shall be tested under rated load and power factor for performance and proper functioning of control and interfacing circuits. Testing at unity power factor only (resistance banks) is not acceptable. Tests shall include:
1. Single step load pickup.
 2. Transient and voltage dip responses, and steady state voltage and speed (frequency) checks.
 3. Generator temperature rise.
- C. The completed installation shall be initially started-up and checked-out for operational compliance by a factory-trained representative of the manufacturer.
- D. Operating Load Tests:
1. Upon completion of initial start-up and system checkout, the supplier of the Engine-Generator Set and Automatic Transfer Switch shall perform field tests (with the Owner and Engineer notified a minimum of 48 hours in advance) to demonstrate load carrying capability, and voltage and frequency stability. With the emergency load at normal operating level, a power failure shall be initiated by turning off the circuit breaker supplying normal power to the Automatic Transfer Switches.
 2. Records shall be maintained throughout the tests of time-of-day, coolant temperature, cranking time until engine starts, time required to come up to operating speed, voltage and frequency overshoot, time required to achieve steady-state conditions, voltage, frequency, current, oil pressure, ambient air temperature, kilowatts, power factor, battery charge rate, etc.
 3. Continue load tests for 2 hours, observing and recording load changes and the resultant effect on voltage and frequency, then return normal power. (Record the time delay on retransfer, and the engine cooldown period and shutdown.)
- E. Upon completion of the above tests, allow the engines to cool for 5 minutes; then apply full rated load (nameplate KW) consisting of facility load supplemented by a load bank if required for 2 hours. (Unity power factor is suitable for on-site testing, provided that rated load tests at power factor have been performed by the manufacturer prior to shipment.)
- F. Tests shall be performed to demonstrate the operation of the cranking cycles, and all safety devices.
- G. Testing will not be allowed when the existing building is occupied. Testing shall not be done without prior approval and scheduling with the Owner.

- H. All systems shall test free from shorts and grounds and shall be without mechanical and electrical defects. If any test indicates a failure, in the opinion of the Engineer; the item shall be replaced or suitably repaired to the approval of the Engineer, and the test repeated without additional cost to the Owner.

3.05. GROUND FAULT TESTING

- A. Equipment ground fault protection systems shall be tested prior to be placed into service to verify proper installation and operation as determined by the manufacturer's published instructions. Include all protected feeders.
- B. The tests shall be performed by a firm that has qualified personnel and proper equipment to perform the tests.
- C. A copy of the tests, trip settings and measurements shall be included in the operation and maintenance manual.

3.06. TRAINING, INSTRUCTION AND ASSISTANCE

- A. After the installation is complete and operating, and prior to acceptance of the work, Contractor shall conduct instruction period(s) at the site, to point out locations of service and maintenance, and instruct the Owner's representatives in the operation of all systems and equipment.
- B. The person(s) who conduct these instructions and demonstrations shall be manufacturer's representatives with substantial training and operating experience on this equipment and project. Their qualifications shall be submitted to the Owner before conducting the instruction period.
- C. Each period shall include preliminary discussion and presentation of information using the actual maintenance manuals required for this project. Contractor shall notify Owner at least 48 hours in advance of readiness to conduct the instruction period. The actual time and date of instruction period shall be acceptable to the Owner and the Contractor.

End of Section 26 32 13

SECTION 26 50 00

LIGHTING & LIGHTING CONTROLS

PART 1 - GENERAL

1.01. APPLICABLE PROVISIONS

- A. The General, Supplementary and other Conditions of the Contract, modifications to the General Conditions, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Division and all its sections.

1.02. SUMMARY

- A. The requirements of this Section and the other Division 26, 27 & 28 Sections apply to all the lighting and lighting control work.
- B. Coordinate lighting and lighting control work with related work shown and specified elsewhere.
- C. Provide all materials necessary for the proper execution and completion of the work as herein specified or called for on the drawings. Required items not specifically mentioned in the specifications or indicated on the drawings shall be provided as necessary to produce the intended results.
- D. Lighting control system work shall include all necessary set-up, programming, testing, commissioning, etc. for a complete and operational system, adjusted, tested and ready for operation.
- E. In the event that any item is not available exactly as specified, the Contractor shall so notify the Engineer in writing as early as possible to allow ample time for an alternate item to be selected without delay to the project.

1.03. QUALITY ASSURANCE

- A. The lighting systems and all controls shall be in accordance with the Washington State Energy Code (WSEC), ASHRAE 90.1 as well as LEED certification requirements.

1.04. SUBMITTALS

- A. Provide submittals for the following:
 - 1. Lighting fixtures, poles and lamps.
 - 2. Lighting control devices.
 - 3. Contactors, relays, contactor panels, control panels, etc.
- B. Provide complete manufacturer's schematic drawings for each system.

PART 2 - PRODUCTS

2.01. GENERAL

- A. Fixtures, luminaires, poles, etc. shall include all necessary mounting and connecting accessories.
- B. Contractor & lighting fixture supplier shall verify that the fixture description match the catalog numbers on the Lighting Fixture Schedule, and that mounting requirements are correct. Advise Engineer of any conflicts or discrepancies.

2.02. LIGHTING

- A. Light Emitting Diode (LED) luminaires shall have a luminous efficacy of at least 100 lumens/W, a color temperature of 3500 K, a CRI of at least 80, an estimated life of at least 70,000 hours at 70% lumen maintenance, and shall include a minimum 5-year warranty on the entire luminaire including the driver. The luminaire and LEDs shall have been tested in accordance with LM-79 and LM-80.

2.03. EMERGENCY LIGHTING

- A. Emergency lighting power units shall be self contained, designed to provide power to fixtures automatically upon interruption of normal electric power for a minimum of 90 minutes. Emergency power source shall be a rechargeable, maintenance free, sealed, spillproof pure lead or lead-calcium battery system. The units shall incorporate a regulated solid-state charger with filtered output and low voltage disconnect.
- B. Controls shall include circuitry to provide continuous self-diagnostic monitoring of the units operation, programmed discharge cycles, charger mode indicator light, unit malfunction indicator lights, and a test switch.

2.04. LIGHTING CONTROLS

- A. Occupancy sensors and photosensors shall be by the same manufacturer and shall form a single integrated system in each room.
- B. Occupancy sensors:
 - 1. Line voltage occupancy sensors shall have the same performance characteristics as low voltage, except with 120/277 relay. Line voltage occupancy sensors shall be Greengate OAC-DT-2000-MV, Hubbell OMNIDT-BP, PLC Multipoint OCS-222-2, Sensorworx SWX-222-2, Watt Stopper DT-355, or approved equal.
- C. Motion sensor switches shall be ultrasonic or passive infrared type, wall mounted, color to match the devices in the building, 120-277 volt, rated minimum 1200 watt, with built-in light level sensor, adjustable sensitivity, adjustable time delay, switch (2 switches if dual control) for manual control and vandal resistant hard lens. Buttons on the face of the switches shall operate in toggle mode to manually turn on/off connected lighting loads. Motion sensor switches shall be Watt-Stopper type PW-301, Hubbell type LHMTS1, Square D type PIR, Sensor Switch type WSX-PDT, or Greengate ONW-D-1001-MV for single switch/level

applications and Watt-Stopper type PW-302, Hubbell type LHMTD2, Square D type PIR or Sensor Switch type WSX 2P-PDT for dual level/switch applications, or approved equal.

2.05. WIRE AND CABLE

- A. Fixture cable, where supplied by the Contractor, shall be stranded copper with 600 volt type PF insulation.
- B. Lighting control system cable shall be as required by the lighting control system manufacturer. Cable shall be listed as being resistant to the spread of fire and bear flammability testing ratings as communications cable type CM or control cable type CL2; except in air handling plenums, cable shall be plenum rated, be listed as being resistant to the spread of fire and bear flammability testing ratings as cable types CMP or CL2P respectively.

PART 3 - EXECUTION

3.01. LOCATIONS

- A. The mounting heights and location of similar equipment and devices shall be consistent, in accordance with the requirements of the ADA where applicable. Special purpose items shall be located conveniently for the purpose intended.
- B. Prior to rough-in, the Contractor shall mark or otherwise show the location of all equipment and devices locations, and obtain specific approval from the Owner and Architect for the location of each prior to installing enclosures, boxes, raceways, etc.
- C. Locate light switches, lighting control stations, etc. 6 inches from door frames (except on center in spaces less than 12 inches), 46 inches to centerline above finished floor. Where located at the hinge side of a door, locate 6 inches beyond the end of the door swing. Match the height of existing similar devices in the immediate vicinity.

3.02. EQUIPMENT, LUMINAIRES AND DEVICES

- A. Equipment, luminaires, devices, etc. shall be installed plumb and true and shall be square with the adjacent walls, ceilings and structural members.
- B. Unless noted or indicated otherwise, orientation of luminaires within a space shall be consistent.
- C. Where multiple 3-way switches are ganged together, the switches shall be arranged so that all of the switches are in the same up or down position when all the fixtures in the space are on. The corresponding switches at the opposite end of the circuit shall also be all in the up or down position.
- D. Equipment, cabinets, boxes, luminaires, devices, etc. shall be accurately mounted and leveled and be firmly supported either directly or indirectly by a sound and safe structural member of the building in accordance with manufacturer's instructions, or as directed. Supports shall be neatly placed and properly fastened.

- E. Occupancy sensors shall be mounted and aimed in accordance with manufacturer's recommendations. All necessary adjustments and settings shall be made in order to ensure the lights will operate when the room is occupied.
- F. The correct lifting, jacking and/or moving gear which will prevent damage to the equipment shall be used.
- G. All bolts, nuts, screws and other fastenings shall be tightened and all covers replaced on equipment and boxes. All electrical connections shall be checked to ensure tightness and electrical conductivity. All gaskets, seals, etc. shall be checked for proper fit.
- H. Follow manufacturer's installation details wherever available. Provide any special mountings, wiring or fittings required.
- I. Provide complete manufacturer's schematic drawings for each system. Any deviations between schematic drawings and contract documents shall be outlined in a separate cover letter. Said deviations will be subject to approval by the Engineer.
- J. Provide gaskets, seals, etc. as required to prevent the entrance of moisture, debris, insects, etc. Check for proper fit.
- K. Repair damaged corrosion protection and touch-up paint all scratched, marred or damaged factory finish on equipment, devices, fixtures, enclosures, etc.

3.03. SUPPORTS

- A. Provide all necessary supports and backing for all fixtures, boxes, enclosures, etc. Attach to wood with wood or lag screws, to metal with machine screws or bolts and to concrete with carbon steel wedge or sleeve type expansion anchors or self-drilling metal anchors and machine screws or bolts. Use size and number of attachments as required to support equipment, fixtures, etc. weight with a safety factor of at least four.
- B. Powder actuated fasteners, plastic expansion type anchors, nails and toggle bolts are not permitted.
- C. Brace all equipment, etc. as required to meet the requirements of seismic zone 3.
- D. Fixtures, luminaires, etc. shall be accurately mounted and leveled and be firmly supported either directly or indirectly by a sound and safe structural member of the building in accordance with manufacturer's instructions, or as directed. Supports shall be neatly placed and properly fastened.
- E. Forms shall not be used while placing light standard (pole) bases. Concrete shall bear against undisturbed earth.
- F. Follow manufacturer's installation details wherever available. Provide all supports, mountings, etc. required, standard or special.

3.04. WIRES AND CABLES

- A. Inspect cable prior to installation to verify that it is identified properly on the reel or box identification label and that it is of proper gauge, containing correct number of pairs, etc. Note

any buckling of the jacket which would indicate possible problems. Damaged cable or any other components failing to meet specification shall not be used in the installation.

- B. Line voltage cable within poles shall be routed in electrical nonmetallic tubing as required to maintain separation of line and low voltage cabling.

3.05. EQUIPMENT TESTING

- A. Before testing, visually inspect equipment thoroughly, and perform mechanical operation tests in accordance with manufacturer's instructions.

- B. Lighting Control System:

1. Before Substantial Completion, arrange and provide an Owner instruction period to designated Owner personnel. Set-up, commissioning of the lighting control system, and Owner instruction includes:
 - a. Confirmation of entire system operation and communication to each device.
 - b. Confirmation of operation of individual relays, switches, occupancy sensors and daylight sensors.
 - c. Confirmation of system programming, photocell settings, override settings, etc.
 - d. Provide training to cover installation, maintenance, troubleshooting, programming, and repair and operation of the lighting control system.
2. Comply with energy code lighting control system "Acceptance Requirements". Acceptance tests are used to verify that lighting controls were installed and calibrated correctly. These tests may require that a responsible party certify that controls are installed and calibrated properly.

- C. Lighting Control Devices:

1. Each individual room shall be configured in either a manual-on/auto-off or auto-on/auto-off configuration, as required by Washington State Energy Code.
2. Stand-alone occupancy sensors shall be individually tested and the test results documented. Verify that the occupancy sensors detect motion in the controlled space immediately when the room is entered. Record the amount of time that the lights stay on after the room is vacated. Delay times shall be programmed as follows:
 - a. Restrooms: 20 minutes.
 - b. Storage Rooms: 5 minutes.
 - c. Utility Rooms: 5 minutes.
3. Wall switch occupancy sensors shall be configured for the optimal setting for the space in which they are installed. Factory default settings are typically not acceptable. Verify settings with the Engineer prior to installation.

4. Comply with energy code lighting control system "Acceptance Requirements". Acceptance tests are used to verify that lighting controls were installed and calibrated correctly. These tests may require that a responsible party certify that controls are installed and calibrated properly.

3.06. DEMONSTRATION & TRAINING

A. Lighting Control Systems and Devices:

1. Before Substantial Completion, arrange and provide an Owner instruction period to designated Owner personnel. Set-up, commissioning of the lighting control system, and Owner instruction includes:
 - a. Instruction in and confirmation of entire system operation and communication to each device.
 - b. Confirmation of operation of individual relays, switches, occupancy sensors, daylight sensors, etc.
 - c. Confirmation of system programming, photocell settings, override settings, etc.
 - d. Provide training to cover installation, maintenance, troubleshooting, programming, and repair and operation of the lighting control system.

B. The person(s) who conduct these instructions and demonstrations shall be a qualified representative(s) of the manufacturer with substantial training and operating experience on this equipment and project, and shall be versed in the operating theory as well as practical operation and maintenance work. Instructor(s) shall have the necessary educational and interpersonal skills, as well as proven ability to effectively perform the training. Their qualifications shall be submitted to the Architect before conducting the instruction period.

C. Include a preliminary discussion and presentation of information using the actual Operation & Maintenance Manuals required for this project. Contractor shall notify Architect at least 14 days in advance of readiness to conduct the instruction period. The actual time and date of instruction period shall be acceptable to the Owner and Engineer.

D. All training material shall be furnished and supplied by the Contractor.

End of Section 26 50 00