

PROJECT MANUAL

PRESIDENT'S OFFICE SUITE ALTERATIONS

AT:

BIRCH MANSION

Prepared for:

RAMAPO COLLEGE OF NEW JERSEY

505 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430

RSC Architects, A.I.A. (P.A.)

3 University Plaza Drive, Suite 600
Hackensack, NJ 07601

RSC Project Number: 94.14.02
RCNJ Project Number: 2014-24-03C

December 8, 2015



Date: _____
John P. Capazzi, A.I.A. #AI10028

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RAMAPO COLLEGE OF NEW JERSEY
505 RAMAPO VALLEY ROAD, MAHWAH, NJ 07430
BID No.: 2014-24-03C**

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RAMAPO COLLEGE OF NEW JERSEY
505 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430

NOTICE TO BIDDERS

PROPOSAL NO. 2014-24-03C

PUBLIC NOTICE is hereby given that SEALED BIDS will be received for the **President's Office Suite Alterations** at Ramapo College of New Jersey.

Sealed bids will be received at the Office of the Director of Purchasing, Academic Complex Wing D Room D-116, Ramapo College of New Jersey, 505 Ramapo Valley Rd., Mahwah, NJ until **2:00 PM local time, Tuesday, January 26, 2016** at which time they will be publicly opened. If because of inclement weather the College is officially closed on the bid due date, the bid opening will be postponed until the next business day at the originally scheduled time.

The project consists of the renovation of the existing president's suite, adjacent offices, and restrooms. The renovation includes, but is not limited to, new finishes throughout, new door and hardware, refinishing existing doors, millwork and trims, installation of new LED light fixtures throughout, new energy efficient windows, insulate areas in need of thermal protection, minor HVAC modifications/additions, and new life safety devices. Bids will be received for a single contract covering all work indicated in the construction documents. The projected start of work date being Monday, March 21, 2016.

A MANDATORY Pre-Bid Conference and Site Inspection has been scheduled promptly at **10:00 a.m. on Thursday, December 17, 2015** in the Trustees Pavilion Room 1 at Ramapo College of New Jersey. **Firms not present at the Pre-Bid Conference and Site Inspection may not submit bids.** If, because of inclement weather, the college is officially closed on the mandatory Pre-Bid Conference date, the mandatory Pre-Bid Conference and Site Inspection shall be postponed until the next business day at the originally scheduled time and location.

The Bid Documents will be available for download from the College's website (<http://www.ramapo.edu/construction-projects/presidents-office-suite-alterations/>) commencing at 9:00 AM, **Thursday, December 10, 2015.**

Proposals must be made upon, and in accordance with, the bid forms supplied by the Director of Purchasing. Bid proposals shall hold for sixty (60) days from the date of the bid opening.

Bidders are required to comply with requirements of New Jersey Public Law 1975 Chapter 127 (N.J.A.C. 17:27). All contractors bidding on this project shall be pre-qualified as General Contractor / Alterations and Additions (C009) by the New Jersey State Division of Property Management and Construction (NJDPMC) in accordance with the N.J. Statutes (N.J.S.A. 52:35.1 et seq.) and must be insured. All bidders, and their subcontractors, shall be registered with the Commissioner of Labor for Public Works in accordance with New Jersey Public Law 1999 Chapter 238 B, The Public Works Contractor Registration Act. All bidders shall comply with New Jersey Public Law 2005 Chapter 51 (formerly Executive Order 134). Contractors shall have not less than five (5) years of successful construction experience.

Bids must be accompanied by a Certified or Cashier's check or Bid Bond payable to Ramapo College of New Jersey in the amount of ten percent (10%) of the total amount bid. The bidder shall provide a Certificate of Surety from a company authorized to issue such coverage in the State of New Jersey. The bidder's surety shall state that 100% performance and payment bonds will be furnished to the successful bidder.

A Prevailing Wage Rate Determination is available for inspection at the Office of the Contracting Officer (Mansion Room 211). The prevailing wage rate will be made a part of the final contract document.

The College reserves the right to waive any informality or to reject any or all bids. Bid envelopes must be marked with **Bid No. 2014-24-03C** and indicate "Sealed Bid" in the lower left hand corner.

Richard M. Roberts
Contracting Officer
(201) 684-7616

**RAMAPO COLLEGE OF NEW JERSEY
BID REQUEST COVER SHEET
(FOR CONSTRUCTION PROJECTS)**

Bid No.: 2014-24-03C

Opening Date: Tuesday, January 26, 2016

Time: 2:00 pm

Title: President's Office Suite Alterations

This bid request consists of the following documents (marked 'X') attached hereto and made part hereof:

<input checked="" type="checkbox"/> Classification & Qualification of Bidders (C102) – **Note: DPMC Notice of Classification, Uncompleted Contracts Form, and Financial Statement required of bidder. **DPMC Notice of Classification required of subcontractors.	<input checked="" type="checkbox"/> Attachment to Application for Payment (C115)
<input checked="" type="checkbox"/> *Proposal Form (C103)	<input checked="" type="checkbox"/> Campus Map & Travel Directions
<input checked="" type="checkbox"/> *Non-Collusion Affidavit (C104)	<input checked="" type="checkbox"/> Wage Rate Requirement (C114)
<input checked="" type="checkbox"/> *Stockholder Disclosure Form (C105)	<input checked="" type="checkbox"/> Public Works Contractor Registration Act **Note: Certificate required of bidder.
<input checked="" type="checkbox"/> Sample Agreement Between Owner & Contractor (C110)	<input checked="" type="checkbox"/> Partial Project Close Out Check List
<input checked="" type="checkbox"/> *Agreement of Surety Form (C106) – Note: NOT required of subcontractors.	<input checked="" type="checkbox"/> Instructions to Bidders
<input checked="" type="checkbox"/> *Bid Security Form (C107)	<input checked="" type="checkbox"/> Request for Substitution Form
<input checked="" type="checkbox"/> Performance/Payment Bond Forms (C108, C109)	<input checked="" type="checkbox"/> General Conditions
<input checked="" type="checkbox"/> Maintenance/Retainage Bond Forms (C116, C117)	_____ Supplementary Conditions
<input checked="" type="checkbox"/> Affirmative Action Requirement	<input checked="" type="checkbox"/> Drawings and Specifications
<input checked="" type="checkbox"/> Executive Orders No. 34, 151, 189, Public Law 2005 Chapter 51, and Public Law 2013 Chapter 147	_____ Addenda Numbers _____

The bidder is responsible for reviewing the bid request documents and submitting a complete bid proposal package.

* Indicates items in the Project Manual which must be returned with the Bid.

** Indicates items which require submission with the Bid but have no forms provided in the Project Manual.

Note: Prevailing Wage Rate Schedule is not included in the Project Manual. It is available for inspection at the office of the Contracting Officer.

By signing this form, the bidder acknowledges receipt of the aforementioned checked-off documents. (If these documents have been mailed at the request and expense of the bidder, bidder shall acknowledge receipt by signing a copy of this form and returning it immediately to: Director of Purchasing, Ramapo College of NJ, 505 Ramapo Valley Road, Mahwah, NJ 07430.

Name (Printed or Typed)

Signature

Firm Name: _____

R.C.N.J. Project No.: **2014-24-03C**
Bid Due Date: **Tuesday, January 26, 2016**

RAMAPO COLLEGE OF NEW JERSEY

Classification & Qualification of Bidders

Conformance by the bidder and applicable prime subcontractors (i.e. Electrical, Mechanical, Plumbing, and Structural) with statute, N.J.S.A. 52:35 (CLASSIFICATION OF BIDDERS), shall be a condition for acceptance of the contractor's proposal and should be followed very carefully in order to avoid problems arising at time of bid opening and subsequent award to low bidder.

1. The bidder shall include a.) the Division of Property Management and Construction (DPMC) Notice of Classification, b.) Uncompleted Contracts Form, and c.) Financial Statement(s). The bidder shall also include d.) the DPMC Notices of Classification of subcontractors for the respective trades which are a part of the contract.
2. If the bidder performs the work of a subcontractor for a particular trade (prime subcontractor i.e., mechanical, electrical, plumbing and structural) or trades, the bidder shall indicate the bidder's corresponding pre-qualification and DPMC classification for each trade performed. The bidder shall then list the bidder's own company and name in the subcontractor lists and data sheets for those trades.
3. Appeals and/or requests by prospective bidders regarding their classification or the classifications of other bidders shall be made in accordance with the relevant sections enumerated in N.J.S.A. 52:35.

NOTE: Until and unless a bidder and the prime subcontractors have received a classification, the bidder is not eligible or entitled to have a bid considered.

Contracting Officer

**PROPOSAL FORM
RAMAPO COLLEGE OF NEW JERSEY**

Return this proposal in a sealed envelope marked with the Project Bid No. and indicate "Sealed Bid" in the lower left hand corner.

Date: January 26, 2016

RCNJ Project No.: 2014-24-03C

Address all inquiries and correspondence to:

Richard M. Roberts, Contracting Officer
Ramapo College of New Jersey
505 Ramapo Valley Road
Mahwah, NJ 07430
Tel.: (201) 684-7616

Project Title: President's Office Suite Alterations

This proposal will be accepted no later than **2:00 PM Day, Date, Year** after which time all proposals will be publicly opened and read.

The undersigned propose to furnish all labor and materials as called for in the Bidding Documents for:

Bid Amount (Base Bid)

_____ (dollars) (\$_____).
(Lump Sum all trades)

Bidding Documents:

1. Bid Request Dated: ---, --, 20--.
2. Drawings Numbered: ---
Dated: ---.
3. Project Manual: Volumes ---
Dated: ---.

Time:

1. The work to be performed under this Contract shall be substantially completed one hundred fifty eight (158) days after notice to proceed.
2. Required Milestones:
 - a.) Demolition of existing walls and protection of work area.
 - b.) Construction of new walls and installation of new doors and glazing.
 - c.) Delivery and installation of new HVAC.
 - d.) Punch list provided by General Contractor.

Pricing to hold good through **90 days after bid due date.**

The contractor must complete required information on the original and all supplemental pages of this proposal. If the information is not properly completed and is not received on time, the bid proposal will not be read and will be rejected.

SUBMIT ONLY ONE BID PROPOSAL AND BID BOND FORM.

Refer to Bid Number in all correspondence.

Please Note: A Certified Check or Bid Bond in amount of 10% of the base bid is required.

Contractors must submit prices for all alternates (or other base bids) when requested, otherwise the bid will be considered non-responsive.

Having examined the plans and specifications with related documents and the site of the proposed work and being familiar with all of the conditions surrounding the construction of the proposed project including availability of materials and labor, Bidder hereby proposes to furnish all labor and materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the price stated. This price is to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within the consecutive calendar days thereafter as stipulated in the specifications. Bidder further agrees to pay as liquidated damages, a sum for each consecutive calendar day thereafter as provided in Article 8.6 in the General Conditions.

Bidder acknowledges and affirms that he has personal knowledge of or has obtained and reviewed a copy of the valid prevailing wage rates for all trades involved in the project, the geographic location of the project as issued by the Commission of the Department of Labor and Industry, Trenton, NJ 08625, (609) 292-2259.

Bidder acknowledges receipt of the following Addenda:

Addendum Number

Date of Addendum

Signature of Principal

FOR SINGLE BID (Lump Sum all trades) ONLY - QUALITY ASSURANCE

FOR BIDDER:

Following are five (5) projects similar to this project recently completed by our firm. (Bidder acknowledges that the College or Architect may contact the Owners or their representatives for references).

1. Owner: _____
Owner's Representative: _____ Tel. No.: () _____
Location: _____
Description: _____
Project Cost: _____
Date Completed: _____

2. Owner: _____
Owner's Representative: _____ Tel. No.: () _____
Location: _____
Description: _____
Project Cost: _____
Date Completed: _____

3. Owner: _____
Owner's Representative: _____ Tel. No.: () _____
Location: _____
Description: _____
Project Cost: _____
Date Completed: _____

4. Owner: _____
Owner's Representative: _____ Tel. No.: () _____
Location: _____
Description: _____
Project Cost: _____
Date Completed: _____

5. Owner: _____
Owner's Representative: _____ Tel. No.: () _____
Location: _____
Description: _____
Project Cost: _____
Date Completed: _____

SUBCONTRACTORS AND THEIR REFERENCES:

List the name and address of each subcontractor.

TRADE: _____

Name: _____

Address: _____

References:

Owner: _____

Owner Representative: _____

Telephone No: _____

Description of Project: _____

Project Cost: _____

Date Completed: _____

Owner: _____

Owner Representative: _____

Telephone No: _____

Description of Project: _____

Project Cost: _____

Date Completed: _____

TRADE: _____

Name: _____

Address: _____

References:

Owner: _____

Owner Representative: _____

Telephone No: _____

Description of Project: _____

Project Cost: _____

Date Completed: _____

Owner: _____

Owner Representative: _____

Telephone No: _____

Description of Project: _____

Project Cost: _____

Date Completed: _____

TRADE: _____
Name: _____
Address: _____

References:

Owner: _____
Owner Representative: _____
Telephone No: _____
Description of Project: _____
Project Cost: _____
Date Completed: _____

Owner: _____
Owner Representative: _____
Telephone No: _____
Description of Project: _____
Project Cost: _____
Date Completed: _____

TRADE: _____
Name: _____
Address: _____

References:

Owner: _____
Owner Representative: _____
Telephone No: _____
Description of Project: _____
Project Cost: _____
Date Completed: _____

Owner: _____
Owner Representative: _____
Telephone No: _____
Description of Project: _____
Project Cost: _____
Date Completed: _____

Additional Trades and their references as applicable:

CONTRACTOR MUST SUBMIT PRICES FOR ALL ALTERNATES AND ALL BASE BIDS, OTHERWISE THE BID WILL BE NON-RESPONSIVE.

ALTERNATE PROPOSALS: DEDUCTIVE (NONE)

ALTERNATE PROPOSALS: ADDITIVE

Alternate No. 1: Remove and dispose of existing carpet, padding and nail strips at the second floor and stair case down to first floor first riser. Upon exposing existing floor, repair any damaged hardwood floor planks by toothing in new plank with a minimum plank overlap of 6". Flooring shall be sanded, receive one coat of stain and finish with three coats of polyurethane sealer (clear). Stain color to be selected by Owner. Coordinate alternate with scope of work on drawing A2.1 and "Unit Price" specification section 012200 for additional information pertaining to this alternate. Total area +/- 430 square feet.

Add the sum of _____ (\$_____)

Alternate No. 2: Remove and dispose of existing carpet, padding and nail strips at the second floor corridor as shown on drawing A2.1. Upon exposing existing floor, repair any damaged hardwood floor planks by toothing in new plank with a minimum plank overlap of 6". Flooring shall be sanded, receive one coat of stain and finish with three coats of polyurethane sealer (clear). Stain color to be selected by Owner. Coordinate alternate with scope of work on drawing A2.1 and "Unit Price" specification section 012200 for additional information pertaining to this alternate. Total area +/- 160 square feet.

Add the sum of _____ (\$_____)

UNIT PRICES:

Unit Prices Item No.	Description of Item (for complete descriptions see specification section 012100-Unit Prices)	Pay Unit	Unit Price	
			Add	Deduct
1	Plaster Repairs	SF		
2	Roof Repairs	SF		
3	Installation of Harwood Flooring	SF		

BASE BIDS

Base Bid for Mansion Ramp and Stair Repairs.

_____ (dollars) \$_____

NOTE: The College reserves the right to award contract upon basis of Lump Sum Bid for entire work or

upon any Base Bid or combination of Base Bids that will best serve the interest of the College.

If the Bidder submits a bid for all base bids combined, the total Bid shall be equal to or less than the total of all Base Bids.

ALLOWANCES:

The Bidder agrees that the following allowances have been included in his proposal.

Description	Amount
1. Contingency Allowance	\$40,000.00
2. Testing and Inspection Allowance	\$5,000.00

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

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract within 10 days and deliver Performance and Payment Bonds as required in Instructions to Bidders.

The bid security attached in the sum of _____ (\$_____) is to become the property of the State in the event the contract and bond are not executed within the time set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

I certify that our firm is classified by the Division of Property Management and Construction in the approved amount of \$ _____ for _____ (trade), until _____ (expiration date). I further certify that the amount of this bid proposal, including all outstanding incomplete contracts, does not exceed my pre-qualification dollar limit.

Respectfully submitted,

(Seal if bid is by a corporation)

By: _____
(Name of firm)

(Signature)

(Title)

(Business Address)

Telephone No.
Facsimile No.

Any change in ownership information since filing your current financial/experience statement? If yes, attach explanation.

() YES () NO

Federal Identification No.

Social Security No.

RAMAPO COLLEGE OF NEW JERSEY

NON-COLLUSION AFFIDAVIT

Project Title: President's Office Suite Alterations **Bid Due Date:** Tuesday, January 26, 2016 at 2:00pm

STATE OF NEW JERSEY (

 (

COUNTY OF (

I, _____ of the City of _____ in the County of _____ and the State of _____ of full age, being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of _____ the bidder making the proposal for the above named project, and that I execute the said Proposal with full authority so to do; that the said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

Subscribed and sworn to before
me the _____ day
of _____ 20__.

Notary Public of

My Commission expires _____, 20__.

STOCKHOLDER DISCLOSURE FORM

Name _____
Address _____
City & State _____

In the spaces provided, list the names and addresses of all owners, partners, directors, officers and indirect owners owning 10% or more interest in the bidder's firm. If corporate owner, list in the space provided stockholders or corporation whose ownership through the corporation is 10% or more of the bidder. Complete affidavit at bottom of form. If this has already been submitted to Ramapo College, use the form for any changes and complete the affidavit.

NAME	ADDRESS (Street, City/Town, County, State, Zip)

President of the firm (Type or print name) _____ Phone _____

I certify that: _____ List of stockholders names and addresses has been submitted to Ramapo College and it is current and correct to the best of my knowledge, with the exceptions as listed above.

_____ The list of stockholders above is current and correct to the best of my knowledge.

_____ There are no stockholders holding 10% or more interest in this corporation or firm to the best of my knowledge.

Signature of Authorized Representative

Type or print name _____ Title _____

SAMPLE CONTRACT FOR CONSTRUCTION

Agreement made on _____, 20____ between **Ramapo College of New Jersey** (the “Owner”) as the project owner, and _____ (the “Contractor”) as the Construction Contractor

Contractor:

Address:

Project: President's Office Suite Alterations

1. **EMPLOYMENT OF CONTRACTOR/PROJECT DESCRIPTION.** The Owner employs the Contractor and the Contractor agrees to perform all obligations described in the Contract Documents (as defined herein) as required in connection with the construction of the project identified above (the “Project”).
2. **CONTRACT DOCUMENTS.** The Contract evidenced by this Agreement includes and incorporates by reference the Contract Documents, as follows:
 - a. Bid Solicitation/Instructions to Bidders
 - b. Contractor's Bid
 - c. This Agreement
 - d. Contract Plans and Specifications
 - e. General Conditions of the Contract for Construction
 - f. Special Conditions and/or Supplemental General Conditions (if any)
 - g. Addenda issued before the bid due date
 - h. Applicable Prevailing Wage Rates Determined by N.J. Department of Labor
 - i. All documents identified on Attachment A – attached hereto (optional).
3. **PROJECT PARTICIPANTS.** The following have been designated or retained by the Owner as project participants:
 - 3.1. A/E (as defined in the General Conditions):

Kenneth Mihalik
RSC Architects
3 University Plaza Drive, Suite 600
Hackensack, NJ 07601
 - 3.2. Contracting Officer (as defined in the General Conditions):

Richard M. Roberts
505 Ramapo Valley Road
Mahwah, N.J. 07430

Title: Associate Vice President/Contracting Officer

3.3 Construction Manager (as defined in the General Conditions)

Daniel P. Connelly
Cambridge Construction Management
97 Grayrock Road
Clinton, NJ 08809
(Applicable to Relocation Services)

3.4 Commissioning Agent (as defined in the General Conditions)
(if applicable):

Firm Name:
Address:
Telephone Number:

The Owner may replace any of these participants upon written notice to the Contractor.

4. **CONTRACT PRICE.** The Contractor shall be paid \$_____ (the “Contract Price”) for the complete performance of this Contract, in accordance with the payment provisions set forth in the Contract Documents.
5. **SCOPE OF WORK.** The Contractor shall perform all Work and satisfy all other obligations described in the Contract Documents. The Contractor shall assume full responsibility for constructing and completing the Work described in the Contract Documents, including providing all labor, subcontractors, services, materials and equipment required, and providing all supervision, management, and scheduling required in the Contract Documents.
6. **CONTRACT TIMES.** It is agreed that Time is of the Essence for all dates and durations specified for the start of construction and the substantial completion and final completion of the Project.
7. **CONSTRUCTION START.** The Work shall commence on the project site no later than _____ calendar days after the Owner issues a Notice to Proceed.
8. **MILESTONES.** The following construction tasks or activities shall be completed within the following number of calendar days after the Owner issues the Notice to Proceed.

Activity	Calendar Days
_____	_____
_____	_____

9. **SUBSTANTIAL COMPLETION.** It is agreed that the Contractor shall achieve Substantial Completion as defined in the Contract Documents, within _____ calendar days after the Owner issues the Notice of Proceed.
10. **FINAL COMPLETION.** It is agreed that all work performed pursuant to this Contract and all contractual obligations of the Contractor shall be finally completed within _____ calendar days after the date of Substantial Completion. All requirements for final completion are set forth in the Contract Documents.
11. **LIQUIDATED DAMAGES FOR DELAY.** If the Contractor fails to substantially complete the Work by the substantial completion date agreed herein, the Contractor shall be liable to the Owner in the following amount as liquidated damages for delay, for each calendar day that the project is not substantially complete beyond the substantial completion date: _____. The Contractor and the Owner agree that the amount stated herein is not a penalty, but is a reasonable estimate of the per diem damage to the Owner from unavailability of this Project for use for the intended purpose, and that the actual loss sustained by the Owner from construction delays is difficult and impractical to quantify. The requirements for claims for liquidated damages are set forth in the General Conditions, Sec. _____.
12. **NOTICES:**
Notice to the Contractor. Written notices required to be given to the Contractor under this Contract shall be addressed to:

- Notice to the Owner.** Written notices required to be given to the Owner under this Contract shall be addressed to:

13. **CONTRACT TERMS, CHANGES, AND LAW:** This Agreement and the Contract Documents incorporated by reference herein constitutes the entire agreement between the Owner and the Contractor, and shall be governed by the laws of the State of New Jersey, including, without limitation, the New Jersey Contractual Liability Act, N.J.S.A. 59:13-1, et seq., including the notice and time of suit provisions of the Act. The terms and conditions of this Contract may not be changed except by a writing signed by duly-authorized representatives of the Contractor and the Owner.
14. **PREVAILING WAGE STATUTE.** The Contractor and all subcontractors must comply with the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., and the regulations promulgated thereunder. Workers employed by the Contractor or any

subcontractor or sub-subcontractor in the performance of services directly on the Project must be paid prevailing wages at the applicable rates as determined by the N.J. Department of Labor, which rates are set forth in the Contract Documents and incorporated herein by reference. As provided by N.J.S.A. 34:11-56.27, the Contractor or any subcontractor may be terminated if any covered worker is not paid the applicable prevailing wages on the Project, and the Contractor and its surety shall be liable to the Owner for any additional costs which result therefrom. The Contractor is advised that the applicable wage rates may change over the life of the Contract, and that payments by the Contractor and all subcontractors to all covered workers shall be in accordance with any rate changes instituted over the life of the Contract. The Contractor shall regularly consult the New Jersey Department of Labor's Prevailing Wage Website (http://lwd.dol.state.nj.us/labor/wagehour/wagerate/prevailing_wage_determinations.html) for changes to prevailing wage rates.

15. **DISCRIMINATION IN EMPLOYMENT.** The Contractor and any subcontractors employed by it shall comply with N.J.S.A. 10:2-1 through 10:2-4 and N.J. S.A. 10:5-1 et seq., including N.J.S.A. 10:5-31 through 35, which prohibit discrimination in employment in public contracts. The statute and the rules and regulations promulgated thereunder shall be considered to be part of this Contract and binding upon the Contractor and its subcontractors. If the Owner is notified of any violation of the public contract awarding regulations in accordance with N.J.A.C. 17:27-7.4 concerning the financing of minority and women outreach and training programs, the Owner reserves the right to deduct the outreach and training allocation from the contract. During the performance of this Contract, the Contractor agrees that:

DISCRIMINATION: It shall not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status or sex. The Contractor shall take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment without regard to their age, race, creed, color, national origin, ancestry, marital status or sex. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising, layoff or termination rate 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 setting forth the provisions of this non-discrimination clause.

ADVERTISEMENTS: The Contractor shall, in all solicitations or advertisements for employees, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex.

NOTICES: The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice advising the labor union or workers' representative of the Contractor's commitment, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

HANDICAP: The Contractor shall comply with N.J.S.A. 10:5-4.1 which prohibits any unlawful discrimination against any person because of a physical handicap, or any unlawful employment practice against such a person unless the nature and the extent of the handicap necessarily precludes the performance of the particular employment duties.

16. **COMPLIANCE WITH PROCUREMENT STATUTES:** The Contractor warrants and represents that this Contract has not been solicited or secured, directly or indirectly, in a manner contrary to the laws of the State of New Jersey, and in particular the provisions of N.J.S.A. 18A:64-6.1, 6.2 and 6.3, and that the Contractor has not and shall not violate the laws of the State of New Jersey relating to the procurement of or the performance of this Contract by any conduct, including the paying of any gratuity of any kind, directly or indirectly, to any public employee or officer. Any violation of this provision shall be cause for the Owner to terminate this Contract, to retain all unpaid and/or unearned monies, and to recover all monies paid. The Contractor shall notify the Owner in writing of any interest which any officer, employee or consultant of the Owner has in, or association with, any contractor, subcontractor, material supplier, consultant, or manufacturer, or other party which has any interest in this Project.

ATTEST: [NAME OF UNIVERSITY/COLLEGE]

(Seal) By _____
[Name/Title of Contracting Officer]
Date_____

ATTEST: [NAME OF CONTRACTOR]

(Seal) By _____
[Name/Title of Corporate Officer]
Date_____

R.C.N.J. Project No.: 2014-24-03C

AGREEMENT OF SURETY FORM

In consideration of the sum of One Dollar, lawful money of the United States, the receipt whereof is hereby acknowledged, and for other valuable consideration

Herein called the Company, consents and agrees that if the project at Ramapo College of New Jersey, Mahwah, New Jersey,

for which the preceding Proposal is made, be awarded to

of

herein called the Bidder, the Company will become bound as surety for its faithful performance and will execute the final bonds required, and if the Bidder shall omit or refuse to execute such Contract when notified or awarded then the Company will pay to Ramapo College of New Jersey, herein called the Obligee, the difference between the amount of the Bidder's bid or proposal, and the lowest amount in excess of said bid, or proposal, for which the Obligee may be able to award said Contract within a reasonable time.

Signed, Sealed and Dated

Surety:

By

BID SECURITY FORM

Know all Men by These Presents, that we, the undersigned,

as Principal, and

as Surety, are hereby held and firmly bound unto Ramapo College of New Jersey, as Owner in the penal sum of _____ Dollars (\$_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Signed, this _____ day of _____, 20____.

The condition of the above obligation is such that whereas the Principal has submitted a bid for the Ramapo College of New Jersey, Mahwah, New Jersey,

Now therefore if said Bid shall be rejected, or in the alternate, if said Bid shall be accepted and the Principal shall execute and deliver a Contract properly completed in accordance with said Bid and shall furnish a bond for the faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith and shall in all other respects perform the agreement created by the acceptance of said Bid, then his obligation shall be void, otherwise the same shall remain in force and effect, it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event, exceed the penal amount of this obligation as herein stated.

IN WITNESS THEREOF, the Principal and Surety have duly executed this Bond under seal the date and year above written.

SEAL

_____(L.S.)
Principal

Surety

By

PERFORMANCE BOND

BOND NO.

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned

as Principal, and _____, a corporation of the State of _____,
duly authorized to do business in the State of New Jersey, having an office at _____ are hereby
held and firmly bound unto RAMAPO COLLEGE OF NEW JERSEY in the penal sum of
(\$ _____) DOLLARS, for the payment of which well and truly to be made, we hereby
jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this _____ day of _____ 20____

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, the above named
Principal did on the _____ day of _____ 20____ enter into a written contract with **RAMAPO
COLLEGE OF NEW JERSEY**

for

which said contract is made a part of this bond the same as though set forth herein;

NOW, if the said principal,
shall well and faithfully do and perform the things agreed by Ramapo College of New Jersey to be done and
performed according to the terms of the said contract, then this obligation shall be void; otherwise the same
shall remain in full force and effect; it being expressly understood and agreed that the liability of the surety
for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein
stated.

The said surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms
of the said contract, or in or to the plans or specifications therefore shall in anywise affect the obligation of
said surety on its bond.

This bond is given in compliance with the requirements of the statutes of **THE STATE OF NEW
JERSEY** in respect to bonds of contractors on public works. Revised Statutes of New Jersey, 1937,
Sections 2A:44-143-147, and amendments thereof, and liability hereunder is limited as in said statutes
provided.

**SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF**

Witness

BY:

Witness as to Surety
Countersigned
this _____ day of _____ 20____

BY:

Attorney-in-Fact

BY: _____ Note:

General Power of Attorney and the Current Financial
Statement of the bonding company must be attached to
each copy of the Performance Bond.

PAYMENT BOND

BOND NO. _____

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned
as Principal, and _____, a corporation of the State of _____,
duly authorized to do business in the State of New Jersey, having an office at _____ are hereby held
and firmly bound unto RAMAPO COLLEGE OF NEW JERSEY in the penal sum of
(\$ _____) DOLLARS, for the payment of which well and truly to be made, we hereby jointly and
severally bind ourselves, our heirs, executors, administrators, successors and assigns,

SIGNED this _____ day of _____ 20____

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, the above named
Principal did on the _____ day of _____ 20__ enter into a written contract with RAMAPO COLLEGE
OF NEW JERSEY

which said contract is made a part of this bond the same as though set forth herein:

NOW, if the said principal,
shall pay all lawful claims of subcontractors, materialmen, laborers, persons, firms or other suppliers or
corporations for labor performed or materials, provisions, provender or other supplies or teams, fuels, oils,
implements or machinery furnished, used or consumed in the carrying forward, performing or completing of
said contract, we agreeing and assenting that this undertaking shall be for the benefit of any subcontractor,
materialman, laborer, person, firm or corporation having a just claim as well as for the obligee herein; then
this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly
understood and agreed that the liability of the surety for any and all claims hereunder shall in no event
exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms
of the said contract, or in or to the plans or specifications therefore shall in anywise effect the obligation of
said surety on its bond.

This bond is given in compliance with the requirements of the statutes of The State of New Jersey in respect
to bonds of contractors on public works. Revised Statutes of New Jersey, 1937, Sections 2A:44-143-147,
and amendments thereof, and liability hereunder is limited as in said statutes provided.

**SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF**

Witness BY:

Witness as to Surety BY:

ATTORNEY-IN-FACT

Countersigned
this _____ day of _____ 20____

BY:

RAMAPO COLLEGE OF NEW JERSEY

FORM OF RETAINAGE BOND

RCNJ PROJECT #: 2014-24-03C

BOND NO. _____

KNOW ALL PERSONS BY THESE PRESENTS that [NAME OF CONTRACTOR], as Principal, and the undersigned surety, are held and firmly bound unto RAMAPO COLLEGE OF NEW JERSEY as Obligee, in the amount of TWO PERCENT (2%) of the total amount paid the Principal under the contract, including any increases due to change orders, quantities of work, new items of work, or other additions as the Obligee may pay under the Contract, lawful money of the United States, well and truly to be paid to RAMAPO COLLEGE OF NEW JERSEY, and we bind ourselves, our heirs, successors, executors, and administrators jointly and severally, firmly by these presents.

Whereas, the Principal has entered into a contract for the above-referenced project with RAMAPO COLLEGE OF NEW JERSEY and;

Whereas, under the contract, the Principal is required before commencing the work provided for in the contract to execute a bond in the above amount;

Now therefore, the condition of this obligation is such that if the Principal and its heirs, successors, executors, and administrators shall fully indemnify and save harmless RAMAPO COLLEGE OF NEW JERSEY from all costs and damages from valid claims filed within 90 days of notification of final acceptance of the work under the contract by any person or entity against the contract funds, and shall fully reimburse RAMAPO COLLEGE OF NEW JERSEY for amounts owed by the **Principal** to RAMAPO COLLEGE OF NEW JERSEY with regard to the contract after notification of final acceptance of the work, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

Provided further, that the said surety(ies) for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work to be performed thereunder, or the Specifications accompanying the same, shall in anywise affect its obligation on this bond. The surety(s) does hereby waive notice of any such change, extension of time, alteration or addition, to the terms of the Contract or to the work or to the Specifications, unless otherwise specified in the contract.

WITNESS our hand this, _____ day of _____, 20____.

CONTRACTOR

SURETY (Print Firm Name and Seal)

By: _____
(Title)

*By: _____ (Title)

By: _____
(Title)

SURETY (Print Firm Name and Seal)

SURETY (Print Firm Name and Seal)

*By: _____ (Title)

*By: _____
(Title)

*NOTE: A Power of Attorney, showing that the surety officer or Attorney-In-Fact has authority to sign such obligation, must be impressed with the corporate seal and attached behind the Payment Bond in each contract.

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____
(Contractor Name, Complete address including ZIP Code, and Legal Title)

As Principal, hereinafter called Contractor, and _____
(Surety name and complete address including ZIP Code)

_____ a corporation organized and existing
under the laws of the State of _____,

with its principal office in the City of _____ as Surety,

hereinafter called Surety, are held firmly bound unto _____
(Owner Name, complete address including ZIP Code, and legal Title)

_____ as Obligee, hereinafter called Owner,

in the amount of _____ Dollars (\$ _____) for the

payment whereof Contractor and Surety bind themselves, their administrators, successors, and assigns, jointly and
severally, firmly by these presents.

WHEREAS, Contractor has written agreement dated _____ entered into a contract with
Owner for _____

In accordance with drawings and specifications prepared by _____,

which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall, for a period of two (2) years from and after the date of completion and acceptance of same by Owner, replace any and all defects arising in the Work, whether resulting from defective materials or defective workmanship, after such period this obligation shall be null and void; otherwise it will remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be, in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, and
2. Shall save the Owner harmless from any claims, judgments, or liens arising from the Surety's failure to either remedy the default or to complete the Contract in accordance with its terms and conditions in a timely manner.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the successors of Owner.

Signed and sealed this (*) _____ day of _____ 20____.

Principal Raised Corporate Seal (MUST BE
AFFIXED)

(Contractor Name)

By _____ (Seal)

(Must be President, Vice President, Owner, Partner, Manager, or Member)

Surety Raised Corporate Seal (MUST BE
AFFIXED)

(Title)

(Surety)

By _____ (Seal)

NOTE: Raised Corporate Seals are
Mandatory.
Please attach Power of Attorney.

NOTE: Applicable sections of attached
acknowledgements must be completed and
returned as part of the bond.

* Power of Attorney must be certified on this
date or later.

ACKNOWLEDGEMENTS

Acknowledgement by Principal if individual or Partnership

1. State of _____
2. County of _____ to wit
3. I, _____ a Notary Public in and for the
4. county and state aforesaid, do hereby certify that _____
Whose name is signed to the foregoing writing, has this day acknowledged the same before me in my said county.
5. Given under my hand this _____ day of _____ 20____
6. Notary Seal 7. _____
(Notary Public)

8. My commission expires on the _____ day of _____ 20____

Acknowledgement by Principal if Corporation

9. State of _____
10. County of _____ to wit
11. I, _____ a Notary Public in and for the
12. county and state aforesaid, do hereby certify that _____
13. who as, _____ signed the foregoing writing for
14. _____ a corporation,
has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation..
15. Given under my hand this _____ day of _____ 20____
16. Notary Seal 17. _____
(Notary Public)

18. My commission expires on the _____ day of _____ 20____

Acknowledgement by Surety

19. State of _____
20. County of _____ to wit
21. I, _____ a Notary Public in and for the
22. county and state aforesaid, do hereby certify that _____
23. who as, _____ signed the foregoing writing for
24. _____ a corporation,
has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation..
25. Given under my hand this _____ day of _____ 20____
26. Notary Seal 27. _____
(Notary Public)

28. My commission expires on the _____ day of _____ 20____

Sufficiency in Form and Manner
Of Execution Approved

Attorney General

This _____ day of _____ 20____.

By: _____
(Deputy Attorney General)

ACKNOWLEDGEMENT PREPARATION INSTRUCTIONS

1. IF PRINCIPAL IS AN INDIVIDUAL OR PARTNERSHIP, HAVE NOTARY COMPLETE LINES (1) THROUGH (8)
2. IF PRINCIPAL IS A CORPORATION HAVE NOTARY COMPLETE LINES (9) THROUGH (18)
3. SURETY MUST HAVE NOTARY COMPLETE LINES (19) THROUGH (28)
4. **Notaries must:**

ACKNOWLEDGEMENT BY PRINCIPAL, IF INDIVIDUAL OR PARTNERSHIP

1. Enter name of State.
2. Enter name of County.
3. Enter name of Notary Public witnessing transactions.
4. Enter name of Principal covered by bond if individual or partnership. (Must be Owner or General Partner of Sole Proprietorship or Partnership)
5. Notary enters date bond was witnessed. Must be the same as, or later than, signature date.
6. Affix Notary Seal.
7. Notary affixes his/her signature.
8. Notary enters commission expiration date.

ACKNOWLEDGEMENT BY PRINCIPAL IF CORPORATION

9. Enter name of State.
10. Enter name of County.
11. Enter name of Notary Public witnessing transactions.
12. Enter name of Corporate Officer signing bond.
13. Enter Title of Corporate Officer signing bond. (Must be President or Vice President of Corporation, Manager or Managing Member of Limited Liability Company)
14. Enter name of Company or Corporation.
15. Notary enters date bond was witnessed. Must be the same as, or later than, signature date.
16. Affix Notary Seal.
17. Notary affixes his/her signature.
18. Notary enters commission expiration date.

ACKNOWLEDGEMENT BY SURETY

19. Enter name of State.
20. Enter name of County.
21. Enter name of Notary Public witnessing transactions.
22. Enter name of person having power of attorney to bind Surety Company.
23. Enter Title of person binding Surety Company.
24. Enter name of Insurance Company (Surety).
25. Notary enters date bond was witnessed. Must be the same as, or later than, signature date.
26. Affix Notary Seal.
27. Notary affixes his/her signature.
28. Notary enters commission expiration date.

POWER OF ATTORNEY INSTRUCTIONS

Power of attorney for surety must be attached showing that it was in full force and effect on signature date indicated on the face of the bond. A raised corporate seal must also be affixed to the Power of Attorney form.

- a. Name of attorney in fact must be listed.
- b. Power of Attorney may not exceed imposed limitations.
- c. Certificate date, the signature date of bond must be entered.
- d. Signature of authorizing official must be affixed. (Signature may be facsimile).
- e. Raised seal must be affixed.**

Ramapo College of New Jersey
505 Ramapo Valley Road
Mahwah, NJ 07430

AFFIRMATIVE ACTION REQUIREMENT

Notice to Bidders
in Event of Award

Construction Contract

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

- a. The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, or sex. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this non-discrimination clause;
- b. The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation;
- c. The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to PL 1975, c. 127, as amended and supplemented from time to time."
- e. "When hiring workers in each construction trade, the contractor or subcontractor agrees to attempt in good faith to employ minority and female workers in each construction trade consistent with the applicable employment goal prescribed by N.J.A.C. 17:27 7.3, provided however, that the Affirmative Action Office may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions A, B, and C as long as the Affirmative Action Office is satisfied that the

contractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Affirmative Action Office, that its percentage of active "card carrying" members who are minority and female workers is equal to or greater than the applicable employment goal prescribed by N.J.A.C. 17:27 7.3 promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures.

- (A) "If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three (3) days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as it is supplemented and amended from time to time. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five (5) days prior to the commencement of construction work, the contractor or subcontractor agrees directly to attempt to hire minority and female workers consistent with the applicable employment goal. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances indicates a significant possibility that the trade union will not refer sufficient minority and female workers consistent with the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire minority and female workers consistent with the applicable employment goal by complying with the following hiring procedures prescribed under (B); and the contractor or subcontractor further agrees immediately to take said action if it determines or is so notified by the Affirmative Action Office that the union is not referring minority and female workers consistent with the applicable employment goal.
- (B) "If the hiring of a workforce consistent with the employment goal has not or cannot be achieved for each construction trade by adhering to the procedures of the preceding provision (A), or if the contractor or subcontractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor agrees to take the following actions consistent with the applicable county employment goal:
 - (1) To notify the Public Agency Compliance Officer, Affirmative Action Office and at least one approved minority referral organization of its manpower needs, and request the referral of minority workers;
 - (2) To notify any minority and female workers who have been listed with it as awaiting available vacancies;
 - (3) Prior to commencement of work, to request the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, to refer minority and female workers to fill job openings;
 - (4) To leave standing requests for additional referral of minority and female workers with the local construction trade union, if the contractor or

subcontractor has a referral agreement or arrangement with a union for the construction trade, the State training and employment service and the other approved referral sources in the area until such time as the workforce is consistent with the employment goal;

- (5) If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and federal statutes and court decisions, that sufficient minority and female employees remain on the site consistent with the employment goal; and to employ any minority and female workers laid off by the contractor or any other construction site in the area on which its workforce composition is not consistent with an employment goal established pursuant to Regulations implementing P.L. 1975, c. 127;
- (6) To adhere to the following procedure when minority and female workers apply or are referred to the contractor or subcontractor:
 - (i) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required, the contractor or subcontractor shall determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each construction trade is not consistent with the applicable employment goal, it shall employ such persons which satisfy appropriate qualification standards; provided however, that a contractor or subcontractor shall determine that the individual at least possesses the skills and experience recognized by any workers skills and experience classification determination which may have been made by a Public Agency Compliance Officer, union, apprentice program or a referral agency, provided the referral agency is acceptable to the Affirmative Action Office and provided further, that if necessary, the contractor or subcontractor shall hire minority and female workers who qualify as trainees pursuant to subsection 2 (k) of these Regulations. All of the requirements of this paragraph, however, are limited by the provisions of paragraph (C) below.
 - (ii) If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of said female or minority group individual shall be maintained on a waiting list for the first consideration in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable employment goal.
 - (iii) If for any reason said contractor or subcontractor determines said minority individual or a female is not qualified or if said individual qualifies as an advance trainee or apprentice, said contractor or subcontractor shall inform said individual in writing with the reasons for the determination and maintain a copy in its files, and send a copy to the Public Agency Compliance Officer and to the Affirmative Action Office.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, and on forms made available by the Affirmative Action Office and shall be submitted promptly to that Office upon request.

(C) "The contractor or subcontractor agrees that nothing contained in the preceding provision (B) shall preclude the contractor or subcontractor from complying with the hiring hall or apprenticeship provisions in any applicable collective bargaining agreement or hiring hall agreement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement; provided, however, that where the practices of a union or apprenticeship program will result in the exclusion of minorities and females or the failure to refer minorities and females consistent with the county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to said provisions (B) without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ female minority advanced trainees and trainees in numbers which result in the employment of advanced trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also the contractor or subcontractor agrees that, in implementing the procedures of the preceding provision (B), it shall, where practicable, employ minority workers residing within the geographical jurisdiction of the union.

"The contractor agrees to complete an Initial Project Manning Report on forms provided by the Affirmative Action Office or in the form prescribed by the Affirmative Action Office and submit a copy of said form no later than three (3) days after signing a construction contract provided, however, that the public agency may extend in a particular case the allowable time for submitting the form to no more than 14 days; and to submit a copy of the Monthly Project Manning Report once a month (by the 7th work day of each month) thereafter for the duration of this contract to the Affirmative Action Office and to the Public Agency Compliance Office. The contractor agrees to cooperate with the Public Agency in the payment of budgeted funds, as is necessary, for on-the-job and off-the-job programs for outreach and training of minority and female trainees employed on the construction projects."

The contractor and its subcontractors shall furnish such reports or other documents to the Affirmative Action Office as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the affirmative action office for conduction a compliance investigation pursuant to Subchapter 10 of the Administrative Code (N.J.A.C 17:27)

Revised 9/98

**State of New Jersey
Executive Department**

EXECUTIVE ORDER NO. 34

Whereas, It is essential that all persons supplying goods or services to the State of New Jersey, or performing contracts or otherwise executing public works with the assistance of and subject to the approval of the State, must meet a standard of responsibility which assures the State and its citizens that such persons will both compete and perform honestly in their dealings with the State and avoid secret or illicit dealing; and

Whereas, It is essential that such persons be fully informed of policies of the State in this regard, and be afforded procedural safeguards appropriate to circumstances which such policies may occasion; and

Whereas, The courts have affirmed the duty and obligation of State officials to develop and effectuate such policies; and

Whereas, It is essential that such policies be uniformly applied by the various agencies of the Executive Branch, and that uniform procedures be adopted to implement them;

Now, Therefore, I, Brendan T. Byrne, Governor of the State of New Jersey, do hereby ORDER and DIRECT that:

1. Debarment, suspension and disqualification are measures which shall be invoked by the State to exclude or render ineligible certain persons from participation in contracts and subcontracts with the State, or in projects or contracts performed with the assistance of and subject to the approval of the State, on the basis of a lack of responsibility. These measures shall be used for the purpose of protecting the interests of the State and not for punishment. To assure the State the benefits to be derived from the full and free competition between and among such persons and to maximize the opportunity for honest competition and performance these measures shall not be invoked for any time longer than deemed necessary to protect the interests of the State.

2. As used in the Order:

- (a) "Debarment" means an exclusion from State contracting, on the basis of a lack of responsibility evidenced by an offense, failure, or indaequacy (sic) of performance, for a reasonable period of time commensurate with the seriousness of the offense, failure, or inadequacy of performance.
- (b) "Suspension" means an exclusion from State contracting for a temporary period of time, pending the completion of an investigation or legal proceedings.
- (c) "Disqualification" means a debarment or a suspension which denies or revokes a qualification to bid or otherwise engage in State contracting which has been granted or applied for pursuant to statute, or rules and regulations.
- (d) "State" means the State of New Jersey, or any of the departments or agencies in the Executive Branch of government with the lawful authority to engage in contracting.
- (e) "Person" means any natural person, company, firm, association, corporation, or other entity.
- (f) "State contracting" means any arrangement giving rise to an obligation to supply any thing to or perform any service for the State, other than by virtue of State employment, or to supply any thing to or perform any service for a private person where the State provides substantial financial assistance and retains the right to approve or disapprove the nature or quality of the goods or service or the persons who may supply or perform the same.
- (g) "Affiliates" means persons having an overt or covert relationship such that any one of them directly or indirectly controls or has the power to control another.

3. The executive head of each department or agency in the Executive Branch, with the lawful authority to engage in State contracting, shall, within 90 days of the date of this Order and in accordance with the provisions of the Administrative Procedures Act (P.L. 1968, c. 410, C. 52:14B-1 et seq.), promulgate rules and regulations governing the causes, conditions and procedures applicable to determinations of debarment, suspension and disqualification by that department or agency. Such rules and regulations shall to the extent consistent with existing law conform to the minimum standards hereinafter set forth, but need not be limited to such standards. In addition to any other filing required by law to be made, each executive head shall file with the Attorney General and the Treasurer a copy of such rules and regulations as may be promulgated.

4. Subject to the conditions hereinafter described, the rules and regulations referred to in Section 3 supra, shall authorize the department or agency to debar a person in the public interest for any of the following causes:

- (a) Commission of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract, or subcontract thereunder, or in the performance of such contract or subcontract.
- (b) Violation of the Federal Organized Crime Control Act of 1970, or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, perjury, false swearing, receiving stolen property, obstruction of justice, or any other offense indicating a lack of business integrity or honesty.
- (c) Violation of the Federal or State Antitrust Statutes, or of the Federal Anti-Kickback Act (18 U.S.C. 874, 40 U.S.C. 276 b, c).
- (d) Violations of any of the laws governing the conduct of elections of the State of New Jersey or of its political subdivisions.
- (e) Violation of the "Law Against Discrimination" (P.L. 1945, c. 169, C. 10:5-1 et seq., as supplemented by P.L. 1975, c. 172), or of the act banning discrimination in public works employment (C. 10:2-1 et seq.) or of the Act prohibiting discrimination by industries engaged in defense work in the employment of persons therein (C. 114, L. 1942, C. 10:1-10 et seq.).
- (f) Violations of any laws governing hours of labor, minimum wage standards, prevailing wage standards, discrimination in wages, or child labor.
- (g) Violations of any laws governing the conduct of occupations or professions or regulated industries.
- (h) Willful failure to perform in accordance with contract specifications or within contractual time limits.
- (i) A record of failure to perform or of unsatisfactory performance in accordance with the terms of one or more contracts, provided that such failure or unsatisfactory performance has occurred within a reasonable time preceding the determination to debar and was caused by acts within the control of the person debarred.
- (j) Violation of contractual or statutory provisions regulating contingent fees.
- (k) Any other cause affecting responsibility as a State contractor of such serious and compelling nature as may be determined by the department or agency to warrant debarment, including such conduct as may be prescribed by the laws or contracts enumerated in this paragraph even if such conduct has not been or may not be prosecuted as violations of such laws or contracts.
- (l) Debarment by some other department or agency in the Executive Branch.

5. The rules and regulations concerning debarment required herein shall include in substance the following conditions:

- (a) Debarment shall be made only upon approval of the executive head of the department or agency, except as otherwise provided by law.

(b) The existence of any of the causes set forth in paragraph 4 of the Order shall not necessarily require that a person be disbarred. In each instance, the decision to debar shall be made within the discretion of the head of the department or agency unless otherwise required by law, and shall be rendered in the best interests of the State.

(c) All mitigating factors shall be considered in determining the seriousness of the offense, failure or inadequacy of performance and in deciding whether debarment is warranted.

(d) The existence of a cause set forth in subparagraphs (a), (b), (c), (d), (e), (f), and (g) of paragraph 4 of this Order shall be established upon the rendering of a final judgement or conviction by a court of competent jurisdiction or by an administrative agency empowered to render such judgement. In the event an appeal taken from such judgement or conviction results in reversal thereof, the debarment shall be removed upon the request of the debarred person unless other cause for debarment exists.

(e) The existence of a cause set forth in subparagraphs (h), (i), (j), and (k) of paragraph 4 of this Order shall be established by evidence which the department or agency determines to be clear and convincing in nature.

(f) Debarment for the cause set forth in subparagraph (l) of paragraph 4 of the Order shall be proper provided that one of the causes set forth in subparagraph 4(a) through 4(k) was the basis for debarment by the original debarring agency. Such debarment may be based entirely on the record of facts obtained by the original debarring agency, or upon a combination of such facts and additional facts.

6. The rules and regulations concerning debarment required by this Order shall include in substance the following provisions regarding procedures, period of debarment and scope of debarment:

(a) A department or agency seeking to debar a person or his affiliates shall furnish such party with a written notice: (i) stating that debarment is being considered, (ii) setting forth the reasons for the proposed debarment, and (iii) indicating that such party will be accorded an opportunity for a hearing if he so requests within a stated period of time. All such hearings shall be conducted in accordance with the provisions of the Administrative Procedures Act. However, where one department or agency has imposed debarment upon a party, a second department or agency may also impose a similar debarment without according an opportunity for a hearing, provided that the second agency furnishes notice of the proposed similar debarment to that party, and accords that party an opportunity to present information in his behalf to explain why the proposed similar debarment should not be imposed in whole or in part.

(b) Debarment shall be for a reasonable, definitely stated period of time which as a general rule shall not exceed 5 years. Debarment for an additional period shall be permitted provided that notice thereof is furnished and the party is accorded an opportunity to present information in his behalf to explain why the additional period of debarment should not be imposed.

(c) Except as otherwise provided by law, a debarment may be removed or the period thereof may be reduced in the discretion of the debarring agency upon oath, supported by documentary evidence, setting forth substantial and appropriate grounds for the granting of relief, such as newly discovered material evidence, reversal of a conviction or judgement, actual change of ownership, management or control, or the elimination of the causes for which the debarment was imposed.

(d) A debarment may include all known affiliates of a person, provided that each decision to include an affiliate is made on a case by case basis after giving due regard to all relevant facts and circumstances. The offense, failure or inadequacy of performance of an individual may be imputed to a person with whom he is affiliated, where such conduct was accomplished within the course of his official duty or was effected by him with the knowledge or approval of such person.

7. Subject to the conditions hereinafter described, the rules and regulations required by this Order shall authorize the department or agency to suspect a person in the public interest for any cause specified in paragraph 4 of this Order, or upon a reasonable suspicion that such cause exists.

8. The rules and regulations concerning suspension required by this Order shall include in substance the following conditions:

- (a) Suspension shall be imposed only upon approval of the executive head of the department or agency and upon approval of the Attorney General, except as otherwise provided by law.
- (b) The existence of any cause for suspension shall not require that a suspension be imposed, and a decision to suspend shall be made at the discretion of the executive head of the department and of the Attorney General, and shall be rendered in the best interests of the State.
- (c) Suspension shall not be based upon unsupported accusation, but upon adequate evidence that cause exists or upon evidence adequate to create a reasonable suspicion that cause exists.
- (d) In assessing whether adequate evidence exists, consideration shall be given to the amount of credible evidence which is available, to the existence or absence of corroboration as to important allegations, and to inferences which may properly be drawn from the existence or absence of affirmative facts.
- (e) Reasonable suspicion of the existence of a cause described in subparagraphs (a), (b), (c), (d), (e), (f), and (g) of paragraph 4 of this Order may be established by the rendering of a final judgement or conviction by a court or administrative agency of competent jurisdiction, by grand jury indictment, or by evidence that such violations of civil or criminal law did in fact occur.
- (f) A suspension invoked by an agency for any of the causes described in subparagraphs (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), and (l) of paragraph 4 of this Order may be the basis for the imposition of a concurrent suspension by another agency, which may impose such suspension without the approval of the Attorney General.

9. The rules and regulations concerning suspension required by the Order shall include in substance the following provisions regarding procedures, period of suspension and scope of suspension:

- (a) A department or agency may suspend a person or his affiliates, provided that within 10 days after the effective date of the suspension, the agency provides such party with a written notice: (i) stating that a suspension has been imposed and its effective date, (ii) setting forth the reasons for the suspension to the extent that the Attorney General determines that such reasons may be properly disclosed, (iii) stating that the suspension is for a temporary period pending the completion of an investigation and such legal proceedings as may ensue, and (iv) indicating that, if such legal proceedings are not commenced or the suspension removed within 60 days of the date of such notice, the party will be given either a statement of the reasons for the suspension and an opportunity for a hearing if he so requests, or a statement declining to give such reasons and setting forth the agency's position regarding the continuation of the suspension. Where a suspension by one agency has been the basis for suspension by another agency, the latter shall note that fact as a reason for its suspension.
- (b) A suspension shall not continue beyond 18 months from its effective date unless civil or criminal action regarding the alleged violation shall have been initiated within that period, or unless debarment action has been commenced. Whenever prosecution or debarment action has been initiated, the suspension may continue until the legal proceedings are completed.
- (c) A suspension may include all known affiliates of a person, provided that each decision to include an affiliate is made on a case by case basis after giving due regard to all relevant facts and circumstances. The offense, failure or inadequacy of performance of an individual may be imputed to a person with whom he is affiliated, where such conduct was accomplished within the course of his official duty or was effectuated by him with the knowledge or approval of such person.

10. The rules and regulations required by this Order shall contain such provisions as may be necessary to conform existing practices and procedures under any relevant prequalification statutes to the procedures governing debarment and suspension required herein, to the extent that such existing practices and procedures may concern the disqualification of any person from State contracting.

11. The rules and regulations required by this Order shall provide that the exclusion from State contracting by virtue of debarment, suspension or disqualification shall extend to all State contracting and subcontracting within the control or jurisdiction of the department or agency which imposes the exclusion. However, when it is determined essential to the public

interest by the head of the department or agency, and upon filing of a finding thereof with the Attorney General, an exception from total exclusion may be made with respect to a particular State contract.

12. Insofar as practicable, prior notice shall be given to the Attorney General and the Treasurer of any proposed debarment or suspension.

13. The Treasurer shall maintain a current list of the names of all persons suspended or debarred, the effective date and term if any thereof, and the agency of agencies which imposed same. Such list shall be available for public inspection.

14. Departments and agencies required by this Order to promulgate rules and regulations governing debarment and suspension are hereby authorized in connection with any proceedings thereunder to receive such information regarding the criminal conduct or criminal record of any person to the extent that such disclosure is deemed appropriate by the Attorney General, consistent with existing Federal and State law.

15. Nothing required by this Order shall be construed to limit the authority of any department or agency to refrain from contracting within the discretion allowed by law.

[seal] Given, under my hand and seal this 29th day of March, in the year of Our Lord, one thousand nine hundred and seventy-six, of the Independence of the United States, the two hundredth.

/s/ BRENDAN BYRNE,
Governor

Attest:

John J. Degnan,
Executive Secretary to the Governor

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STATE OF NEW JERSEY
Executive Department

EXECUTIVE ORDER NO. 189

WHEREAS, it is essential that all persons supplying goods or services to the State of New Jersey, or performing contracts or otherwise executing public works with the assistance of and subject to the approval of the State, must meet a standard of responsibility which assures the State and its citizens that such persons will both compete and perform honestly in their dealings with the State and avoid conflicts of interest; and

WHEREAS, the New Jersey Conflicts of Interest Law prohibits State officers or employees and special State officers or employees from having any interest or engaging in any activity that is in substantial conflict with the proper discharge of their duties in the public interest or from undertaking any employment or service which might reasonably be expected to impair their objectivity or independence of judgement; and

WHEREAS, the New Jersey Conflicts of Interest Law prohibits State officers or employees and special State officers or employees from acting in their official capacity in any matter wherein they have a direct or indirect personal financial interest which might reasonably be expected to impair their objectivity or independence of judgement; and

WHEREAS, N.J.S.A. 52:34-19 provides that it shall be a misdemeanor to pay any fee, commission, compensation, gift or gratuity of any kind, directly or indirectly, to any person employed by the Department of the Treasury or to any other person in the employ of the State having any duties or responsibilities in connection with the purchase or acquisition of any property or services by the State or any agency or instrumentality thereof by or on behalf of any seller or supplier of such goods or services or other party to contract with the State; and

WHEREAS, it is essential that persons providing goods or services to, or performing contracts for, the State be fully informed of the policies of the State concerning their relationships with State officers or employees and special State officers or employees and that these policies be uniformly applied by the various agencies of the Executive Branch; and

WHEREAS, it is therefore necessary to supplement Executive Order No. 34 (1976), which provides the grounds and procedures applicable to the debarment, suspension and disqualification of State vendors, to encompass appropriate standards prohibiting conflicts of interest on the part of present and prospective State vendors;

NOW, THEREFORE, I, THOMAS H. KEAN, Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of the State, do hereby ORDER and DIRECT:

1. As used in this Order, "vendor" means any person, firm, corporation, or other entity which provides or offers or proposes to provide goods or services to or perform any contract for any State agency.

2. The executive head of each department or agency in the Executive Branch with the lawful authority to engage in State contracting shall, in accordance with the provisions of the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., promulgate regulations supplementing those heretofore established pursuant to Executive Order No. 34 (1976) governing the causes, conditions and procedures applicable to determinations of debarment, suspension and disqualification by the department or agency to include the minimum standards hereinafter set forth. In addition to any other filing required by law to be made, each executive head shall file with the Attorney General and Treasurer a copy of such rules and regulations as may be promulgated.

3. The rules and regulations referred to in Paragraph 2 shall include the following prohibitions on vendor activities, the violation of which shall render said vendor liable to debarment in the public interest, pursuant to the procedures established by Executive Order No. 34 (1976), by any Executive department or agency:

a. No vendor shall pay, offer to pay, or agree to pay, either directly or indirectly, any fee, commission, compensation, gift, gratuity, or other thing of value of any kind to any State officer or employee or special State officer

or employee, as defined by N.J.S.A. 52:13D-13b. and e., in the Department of the Treasury or any other agency with which such vendor transacts or offers or proposes to transact business, or to any member of the immediate family, as defined by N.J.S.A. 52:13D-13i., of any such officer or employee, or any partnership, firm, or corporation with which they are employed or associated, or in which such officer or employee has an interest within the meaning of N.J.S.A. 52:13D-13g.

b. The solicitation of any fee, commission, compensation, gift, gratuity or other thing of value by any State officer or employee or special State officer or employee from any State vendor shall be reported in writing forthwith by the vendor to the Attorney General and the Executive Commission on Ethical Standards.

c. No vendor may, directly or indirectly, undertake any private business, commercial or entrepreneurial relationship with, whether or not pursuant to employment, contract or other agreement, express or implied, or sell any interest in such vendor to, any State officer or employee or special State officer or employee having any duties or responsibilities in connection with the purchase, acquisition or sale of any property or services by or to any State agency or any instrumentality thereof, or with any person, firm or entity with which he is employed or associated or in which he has an interest within the meaning of N.J.S.A. 52:13D-13g. Any relationships subject to this provision shall be reported in writing forthwith to the Executive Commission on Ethical Standards, which may grant a waiver of this restriction upon application of the State officer or employee or special State officer or employee upon a finding that the present or proposed relationship does not present the potential, actuality of appearance of a conflict of interest.

d. No vendor shall influence, or attempt to influence or cause to be influenced, any State officer or employee or special State officer or employee in his official capacity in any manner which might tend to impair the objectivity or independence of judgement of said officer or employee.

e. No vendor shall cause or influence, or attempt to cause or influence, any State officer or employee or special State officer or employee to use, or attempt to use, his official position to secure unwarranted privileges or advantages for the vendor or any other person.

f. The provisions cited above in paragraph 3a through 3e shall not be construed to prohibit a State officer or employee or special State officer or employee from receiving gifts from or contracting with vendors under the same terms and conditions as are offered or made available to members of the general public subject to any guidelines the Executive Commission on Ethical Standards may promulgate under paragraph 3c.

4. The rules and regulations referred to in Paragraph 2, supra, shall require that the prohibitions set forth Paragraph 3, supra, shall be included in all requests for proposals issued by any State department or agency and in all contracts executed on behalf of a State department or agency, other than those of an interstate agency to which New Jersey is a party and contracts entered into on behalf of the interstate agency.

5. Nothing required by this Order shall be construed to limit the authority of any State department or agency to refrain from contracting within the discretion allowed by law, or to limit N.J.S.A. 52:34-19 or any other applicable statute or regulation.

6. This Order shall take effect on the ninetieth day following its execution.

GIVEN, under my hand and seal, this 20th day of July
in the Year of Our Lord, one thousand nine hundred
and eighty-eight, and of the Independence of the
United States, the two hundred and thirteenth.
/s/ Thomas H. Kean
Governor

(seal)

Attest:
/s/ Michael R. Cole, Chief Counsel

Public Law 2005, Chapter 51
Effective October 15, 2004

To be eligible for an award, a vendor must comply with the requirements of Public Law 2005, Chapter 51 (N.J.S.A. 19:44A-20.13-20.25, superseding Executive Order 134 (2004)).

CHAPTER 51

AN ACT concerning campaign contributions by certain business entities seeking or holding State contracts, supplementing P.L.1973, c.83 (C.19:44A-1 et seq.), amending P.L.2004, c.19, and repealing section 1 of P.L.2004, c.19 (C.19:44A-20.2).

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

C.19:44A-20.13 Findings, declarations relative to certain campaign contributions by business entities.

1. The Legislature finds and declares that:

In our representative form of government, it is essential that individuals who are elected to public office have the trust, respect and confidence of the citizenry; and

All individuals, businesses, associations, and other persons have a right to participate fully in the political process of New Jersey, including making and soliciting contributions to candidates, political parties and holders of public office; and

When a person or business interest makes or solicits major contributions to obtain a contract awarded by a government agency or independent authority, this constitutes a violation of the public's trust in government and raises legitimate public concerns about whether the contract has been awarded on the basis of merit; and
The growing infusion of funds donated by business entities into the political process at all levels of government has generated widespread cynicism among the public that special interest groups are "buying" favors from elected officeholders; and

For the purposes of protecting the integrity of government contractual decisions and of improving the public's confidence in government, it is a compelling interest of this State to prohibit awarding government contracts to business entities which are also contributors to candidates, political parties and the holders of public office; and
There exists the perception that campaign contributions are often made to a State or county political party committee by an individual or business seeking favor with State elected officials, with the understanding that the money given to such a committee will be transmitted to other committees in other parts of the State, or is otherwise intended to circumvent legal restrictions on the making of political contributions or gifts directly to elected State officials, thus again making elected State officials beholden to those contributors; and

County political party committees, through their powers of endorsement, fundraising, ballot slogan or party line designation, and other means, exert significant influence over the gubernatorial primary and general election process; and

Although the right of individuals and businesses to make campaign contributions is unequivocal, that right may be limited, even abrogated, when such contributions promote the actuality or appearance of public corruption; and
It is essential that the public have confidence that the selection of State contractors is based on merit and not on political contributions made by such contractors and it is essential that the public have trust in the processes by which taxpayer dollars are spent; and

It has long been the public policy of this State to secure for the taxpayers the benefits of competition, to promote the public good by promoting the honesty and integrity of bidders for public contracts and the system, and to guard against favoritism, improvidence, extravagance and corruption in order to benefit the taxpayers; and

In the procurement process, our public policy grants to the State broad discretion, taking into consideration all factors, to award a contract to a bidder whose proposal will be most advantageous to the State; and

The operations of the State government must be effectively and fairly managed to ensure public order and prosperity, and malfeasance, in whatever form it may take, must be confronted and uprooted; and
The Legislature must safeguard the integrity of State government procurement by imposing restrictions on State agencies and independent authorities to insulate the negotiation and award of State contracts from political contributions that pose the risk of improper influence, purchase of access, or the appearance thereof.

C.19:44A-20.14 Contributors, certain, ineligibility to enter into agreement with the State or its authorities.

2. The State or any of its purchasing agents or agencies or those of its independent authorities, as the case may be, shall not enter into an agreement or otherwise contract to procure from any business entity services or any material, supplies or equipment, or to acquire, sell, or lease any land or building, where the value of the transaction exceeds \$17,500, if that business entity has solicited or made any contribution of money, or pledge of contribution, including in-kind contributions to a candidate committee or election fund of any candidate or holder of the public office of Governor, or to any State or county political party committee: (i) within the eighteen months immediately preceding the commencement of negotiations for the contract or agreement; (ii) during the term of office of a Governor, in the case of contributions to a candidate committee or election fund of the holder of that office, or to any State or county political party committee of a political party nominating such Governor in the last gubernatorial election preceding the commencement of such term; or (iii) within the eighteen months immediately preceding the last day of the term of office of Governor, in which case such prohibition shall continue through the end of the next immediately following term of the office of Governor, in the case of contributions to a candidate committee or election fund of the holder of that office, or to any State or county political party committee of a political party nominating such Governor in the last gubernatorial election preceding the commencement of the latter term.

C.19:44A-20.15 Certain contributions prohibited by certain contractors of the State or its authorities.

3. No business entity which agrees to any contract or agreement with the State or any department or agency thereof or its independent authorities either for the rendition of services or furnishing of any material, supplies or equipment or for the acquisition, sale, or lease of any land or building, if the value of the transaction exceeds \$17,500, shall knowingly solicit or make any contribution of money, or pledge of a contribution, including in-kind contributions, to a candidate committee or election fund of any candidate or holder of the public office of Governor or to any State or county political party committee prior to the completion of the contract or agreement.

C.19:44A-20.16 "Contribution" defined.

4. For the purposes of this act, a "contribution" means a contribution reportable by the recipient under "The New Jersey Campaign Contributions and Expenditures Reporting Act, " P.L.1973, c.83 (C.19:44A-1 et seq.) made on or after the effective date of this act.

C.19:44A-20.17 "Business entity" defined.

5. For the purposes of this act, a "business entity" means any natural or legal person, business corporation, professional services corporation, limited liability company, partnership, limited partnership, business trust, association or any other legal commercial entity organized under the laws of this State or any other state or foreign jurisdiction. The definition of a business entity includes: (i) all principals who own or control more than 10 percent of the profits or assets of a business entity or 10 percent of the stock in the case of a business entity that is a corporation for profit, as appropriate; (ii) any subsidiaries directly or indirectly controlled by the business entity; (iii) any political organization organized under section 527 of the Internal Revenue Code that is directly or indirectly controlled by the business entity, other than a candidate committee, election fund, or political party committee; and (iv) if a business entity is a natural person, that person's spouse or child, residing therewith, are also included within this definition.

C.19:44A-20.18 Report of contributions by business entities as part of State procurement process.

6. Prior to awarding any contract or agreement to procure services or any material, supplies or equipment from, or for the acquisition, sale, or lease of any land or building from or to, any business entity, the State or any of its purchasing agents or agencies, as the case may be, shall require, as part of the procurement process, the business entity to report all contributions the business entity made during the preceding four years to any political organization organized under section 527 of the Internal Revenue Code that also meets the definition of a "continuing political committee" within the meaning of section 3 of P.L.1973, c.83 (C.19:44A-3). Such reporting

shall be made in a manner and form to be developed by the State Treasurer with the advice of the New Jersey Election Law Enforcement Commission, which agencies shall promulgate regulations to effect and implement this disclosure obligation. Such reports shall be subject to review by the State Treasurer. If the State Treasurer determines that any such contribution, or any other act that would constitute a breach of contract pursuant to section 9 of this act, poses a conflict of interest in the awarding of any contract or agreement, the State Treasurer shall disqualify such business entity from bidding on or being awarded such contract or agreement.

C.19:44A-20.19 Written certification by business entities relative to contributions.

7. Prior to awarding any contract or agreement to procure services or any material, supplies or equipment from, or for the acquisition, sale, or lease of any land or building from or to, any business entity, the State or any of its purchasing agents or agencies or independent authorities, as the case may be, shall require the business entity to provide a written certification that it has not made a contribution that would bar the award of the contract pursuant to this act. The business entity shall have a continuing duty to report any contribution it makes during the term of the contract. Such reports shall be subject to review by the State Treasurer. If the State Treasurer determines that any such contribution poses a conflict of interest, such contribution shall be deemed a material breach of such contract or agreement.

C.19:44A-20.20 Request for reimbursement of contribution.

8. If a business entity inadvertently makes a contribution that would otherwise bar it from receiving a contract or makes a contribution during the term of a contract in violation of this act, the entity may request a full reimbursement from the recipient and, if such reimbursement is received within 30 days after the date on which the contribution was made, the business entity would again be eligible to receive a contract or would no longer be in violation, as appropriate. It shall be presumed that contributions made within 60 days of a gubernatorial primary or general election were not made inadvertently.

C.19:44A-20.21 Breach of terms of government contract concerning contributions.

9. It shall be a breach of the terms of the government contract for a business entity to: (i) make or solicit a contribution in violation of this act; (ii) knowingly conceal or misrepresent a contribution given or received; (iii) make or solicit contributions through intermediaries for the purpose of concealing or misrepresenting the source of the contribution; (iv) make or solicit any contribution on the condition or with the agreement that it will be contributed to a campaign committee of any candidate or holder of the public office of Governor, or to any State or county party committee; (v) engage or employ a lobbyist or consultant with the intent or understanding that such lobbyist or consultant would make or solicit any contribution, which if made or solicited by the business entity itself, would subject that entity to the restrictions of this act; (vi) fund contributions made by third parties, including consultants, attorneys, family members, and employees; (vii) engage in any exchange or contributions to circumvent the intent of this act, or (viii) directly or indirectly, through or by any other person or means, do any act which would subject that entity to the restrictions of this act.

C.19:44A-20.22 Exception for public exigency.

10. This act shall not prohibit the awarding of a contract when the public exigency requires the immediate delivery of goods or performance of services as determined by the State Treasurer.

C.19:44A-20.23 Applicability of act to State agencies and authorities.

11. This act shall apply to all State agencies including any of the principal departments in the Executive Branch, and any division, board, bureau, office, commission or other instrumentality within or created by such department and any independent State authority, board, commission, instrumentality or agency.

C.19:44A-20.24 Contract, bid applications and specs to describe requirements of act.

12. Every contract and bid application and specifications promulgated in connection therewith covered by this act shall contain a provision describing the requirements of this act and a statement that compliance with this act shall be a material term and condition of said contract or bid application and binding upon the parties thereto upon the entry of all applicable contracts.

C.19:44A-20.25 Inapplicability of act under federal law or eminent domain.

13. The provisions of sections 1 through 12 of this act, P.L.2005, c.51, shall not: a. apply in circumstances when it is determined by the federal government or a court of competent jurisdiction that its application would violate federal

law or regulation; or b. prevent the State, its executive departments, agencies or independent authorities from complying with all of the requirements, conditions and obligations of the "Eminent Domain Act of 1971," P.L.1971,

c.361 (C.20:3-1 et seq.), as amended and supplemented.

14. Section 6 of P.L.2004, c.19 (C.19:44A-20.7) is amended to read as follows:

C.19:44A-20.7 Definitions relative to certain campaign contributions.

6. As used in sections 2 through 12 of this act:

"business entity" means any natural or legal person, business corporation, professional services corporation, limited liability company, partnership, limited partnership, business trust, association or any other legal commercial entity organized under the laws of this State or of any other state or foreign jurisdiction;

"interest" means the ownership or control of more than 10% of the profits or assets of a business entity or 10% of the stock in the case of a business entity that is a corporation for profit, as appropriate;

"fair and open process" means, at a minimum, that the contract shall be: publicly advertised in newspapers or on the Internet website maintained by the public entity in sufficient time to give notice in advance of the contract; awarded under a process that provides for public solicitation of proposals or qualifications and awarded and disclosed under criteria established in writing by the public entity prior to the solicitation of proposals or qualifications; and publicly opened and announced when awarded. The decision of a public entity as to what constitutes a fair and open process shall be final.

"State agency in the Legislative Branch" means the Legislature of the State and any office, board, bureau or commission within or created by the Legislative Branch.

15. Section 7 of P.L.2004, c.19 (C.19:44A-20.8) is amended to read as follows:

C.19:44A-20.8 Business entity to provide written certification, ELEC reports.

7. a. Prior to awarding any contract, except a contract that is awarded pursuant to a fair and open process, a State agency in the Legislative Branch, a county, or a municipality shall require the business entity to which the contract is to be awarded to provide a written certification that it has not made a contribution that would bar the award of a contract pursuant to this act.

b. A business entity shall have a continuing duty to report to the Election Law Enforcement Commission any contributions that constitute a violation of this act that are made during the duration of a contract.

Repealer.

16. Section 1 of P.L.2004, c.19 (C.19:44A-20.2) is repealed.

Superseder.

17. Executive Order No. 134 (2004) is hereby superseded.

18. Sections 14, 15 and 16 shall take effect on the original effective date of P.L.2004, c.19

P.L. 2005, CHAPTER 51

5

(C.19:44A-20.2 et seq.), and the remainder of this act shall take effect immediately and shall be retroactive to October 15, 2004 and shall apply to contributions made and contracts awarded on or after October 15, 2004.

Approved March 22, 2005.

**State of New Jersey
Executive Department**

Executive Order #151

WHEREAS, New Jersey is one of the most racially, culturally, and ethnically diverse states in the United States, and this diversity is reflected in the leaders and owners of its businesses, in the leaders and members of the labor movement, and in the employees in every segment of the workforce; and

WHEREAS, the State's business community includes multi-national enterprises, industrial, commercial, and small business sectors; and

WHEREAS, the State's thousands of small businesses, each with fewer than 100 employees, together generate almost 40% of the jobs in the State; and

WHEREAS, small, minority, and women-owned business enterprises have historically been underrepresented in the receipt of State contract awards; and

WHEREAS, the State's workforce provides New Jersey's multinational enterprises, its industrial, commercial, and small business sectors, and its public and not-for-profit sectors with highly educated, highly skilled, and highly motivated employees, who contribute to the prosperity of the State while supporting their families; and

WHEREAS, in response to the current national recession, the United States Congress enacted the American Recovery and Reinvestment Act of 2009 (ARRA), which will increase federal spending at the State and local levels by approximately \$10 billion, and will fully fund certain work in the State, and partially fund other State projects; and

WHEREAS, given the recession and unemployment levels in New Jersey, it is imperative that every sector of the economy be offered the opportunity to benefit from the federal economic recovery funds and the State's own spending; and

WHEREAS, many of the State's businesses have significant public construction contracts and other contracts to provide goods or services to government and many others would like the opportunity to compete for these contracts to expand their businesses while serving the public; and

WHEREAS, residents of the State of New Jersey deserve a government that provides equal opportunity for all contractors to compete to submit winning bids on public contracts; and

WHEREAS, residents of the State of New Jersey, especially during these difficult economic times, deserve a government that does everything it can to expand job opportunities, particularly for men and women who are entering the workforce, who have experienced difficulties entering the workforce, or who have recently become unemployed or underemployed; and

WHEREAS, the State created an internet site, <http://www.recovery.nj.gov>, which outlines the allocation of New Jersey's share of economic recovery funds under the ARRA; and

WHEREAS, to spend ARRA funds transparently and ensure that those seeking work have a fair chance to obtain ARRA-funded employment, State agencies and entities should be required to post all State and ARRA-funded jobs on the State Job Bank internet site, <http://NJ.gov/JobCentralNJ>, to allow New Jersey residents to identify these employment opportunities; and

WHEREAS, the State must procure its construction services, goods, and other services as efficiently as possible, with transparency in the processing, selection, and awarding of public contracts; and

WHEREAS, robust competition for public contracts ensures that the government of the State of New Jersey obtains the construction services, goods, and other services it needs to perform its vital functions with maximum cost effectiveness; and

WHEREAS, broad and sustained efforts to notify all potential bidders of opportunities to contract with government should be encouraged to promote competition for public contracts, thus benefiting the public fisc; and

WHEREAS, the State of New Jersey commissioned the State of New Jersey Construction Services Disparity Study 2000 – 2002 (October 2005) and the State of New Jersey Disparity Study of Procurement in Professional Services, Other Services, and Goods and Commodities (June 2005), and both studies documented significant disparities between the firms ready, willing, and able to do business with the State, and those firms actually awarded contracts by State departments, agencies, authorities, colleges, and universities, as a result of which this Administration created through Executive Order No. 34 (2006) the Division of Minority and Women Business Development (“Division of M/W Business Development”); and

WHEREAS, Executive Order No. 34 charged the Director of the Division of M/W Business Development with monitoring programs to increase the participation of minority and women-owned businesses in the State’s purchasing and procurement processes; and

WHEREAS, since its inception, the Division of M/W Business Development, working with the Department of the Treasury’s Office of Supplier Diversity (“OSD”), has identified strategies to increase the number of small and minority and women-owned businesses interested in and eligible to benefit from state procurement activity; and

WHEREAS, the Division of M/W Business Development and OSD have increased outreach to and expanded the ability of these businesses to fulfill bid requirements for state contracts; and

WHEREAS, the Division of Public Contracts Equal Employment Opportunity Compliance in the Department of the Treasury (Division of Contract Compliance) monitors the employment of women and minorities with businesses that contract with government in an effort to ensure that contractors and vendors make good faith efforts to hire minorities and women in accordance with targeted goals based on the United States Census’ workforce availability statistics;

NOW, THEREFORE, I, JON S. CORZINE, Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of this State, do hereby ORDER and DIRECT:

1. All members of the public should be afforded the opportunity to benefit from the federal economic recovery funds and associated state spending, and in particular, this Administration re-affirms the State’s commitment, expressed in statute and regulation, that every public contract, whether for construction services, goods, or other services, shall provide equal employment opportunity for women and minorities.
2. The Commissioners of the Departments of Community Affairs, Education, Environmental Protection, and Transportation; the President of the Board of Public Utilities; and the executive directors of the Schools Development Authority and the Economic Development Authority are directed to meet with members of the Governor’s office, the Department of the Treasury, and representatives of the United States Department of Labor’s Office of Federal Contract Compliance Programs (OFCCP) to ensure that those departments receiving the bulk of federal economic recovery funds will provide the OFCCP their complete cooperation in complying with its mandates.
3. The Division of Contract Compliance shall be the entity within the Executive Branch responsible for determining whether minorities and women have been offered a fair opportunity for employment on State contracts. Executive branch departments and agencies, independent authorities, and State colleges and universities are directed to cooperate fully with the Division of Contract Compliance’s enforcement efforts, consistent with law, and to award public contracts only to those businesses that agree to comply with equal employment opportunity and affirmative action requirements.

4. The Division of Contract Compliance shall work cooperatively with the OFCCP, including sharing its workforce data to the maximum extent permitted by law, to assist the OFCCP in its enforcement efforts.

5. When not restricted by any other State or federal law, the Division of Contract Compliance shall determine whether each of the State entities whose performance it monitors (the "Reporting Agencies" listed in Appendix A to this Order) properly allocated and released to the Department of Labor and Workforce Development, as authorized by law, one-half of one percent of the total cost of a construction contract of \$1,000,000 or more, to be used by the department for the New Jersey Builders Utilization Initiative for Labor Diversity program to train minorities and women for employment in construction trades. This provision shall apply to those construction contracts where the funding for the contract consists entirely of appropriated funds or a combination of funds from appropriated funds and other sources.

6. As a result of the aforementioned significant disparities in employment of minorities and women on construction sites and within the construction trades, all construction contracts entered into and funded, in whole or in part, by the State shall include mandatory EEO/AA contract language (in the form of Appendix B to this Order) that requires contractors to make a good faith effort to recruit and employ minorities and women as required by provisions of the Administrative Code, including but not limited to N.J.A.C. 17:27-3.6 to 3.8, and 17:27-7.3 and 7.4. In addition to the language set forth in Appendix B, such construction contracts shall contain the contractual language as required by N.J.A.C. 17-27-3.6, 3.7, and 3.8. As to the portion of each contract that is State funded, the language of the contract shall provide, consistent with Appendix B, that payment may be withheld for failure of the contractor to demonstrate to the satisfaction of the Reporting Agency that the required good faith effort was made. Failure of a contractor to satisfy the good faith effort requirement of its contract may also subject it to assessments imposed pursuant to findings of the Division of Contract Compliance in the Department of the Treasury, in accordance with N.J.A.C. 17:27-10.

7. Except as described in subparagraphs (a) and (b) of this paragraph, each Executive Branch agency that is a recipient of federal economic recovery funds pursuant to ARRA shall include in any contract, grant, or agreement funded in whole or in part with ARRA funds a clause requiring subrecipients, contractors, subcontractors, local education agencies, and vendors to post all job openings created pursuant to the contract, grant, or agreement on the State's Job Bank at least 14 days before hiring is to commence. The clause shall state: "Since the funds supporting this contract, grant, or agreement are provided through the American Recovery and Reinvestment Act of 2009 (ARRA), the subrecipient, contractor, subcontractor, local education agency, or vendor will post any jobs that it creates or seeks to fill as a result of this contract, grant, or agreement. The subrecipient, contractor, subcontractor, local education agency, or vendor will post jobs to the New Jersey State Job Bank by submitting a job order using the form available at <http://NJ.gov/JobCentralNJ>, notwithstanding any other posting the subrecipient, contractor, subcontractor, local education agency, or vendor might make. Any advertisements posted by the subrecipient, contractor, subcontractor, local education agency, or vendor for positions pursuant to this contract, grant, or agreement must indicate that the position is funded with ARRA funds."

a. Posting shall not be required where the employer intends to fill the job opening with a present employee, a laid-off former employee, or a job candidate from a previous recruitment, where pre-existing, legally binding collective bargaining agreements provide otherwise, or where an exception has been granted to the Reporting Agency by the Department of Labor and Workforce Development.

b. Nothing in this Order shall be interpreted to require the employment of apprentices if such employment may result in the displacement of journey workers employed by any employer, contractor or subcontractor.

8. All local government entities and local education agencies that have received or will receive directly from a federal agency federal economic recovery funds are strongly encouraged to require their contractors and subcontractors to post job openings on the State's Job Bank at least 14 days before hiring is to commence. Moreover, all New Jersey employers that enter into contracts funded with ARRA funds received by a local government entity or a local education agency directly from a federal agency are likewise strongly encouraged to post job openings created pursuant to the ARRA.

9. The Division of M/W Business Development shall send to the Reporting Agencies the contractual language set forth in Appendix C of this Order. Provisions of this contractual language have been shown to have a significant impact on (a) increasing the number of small and minority and women-owned businesses aware of contracting opportunities with

the State and (b) increasing the number of such businesses competing for contracts with the State or subcontracts with entities contracting with the State. The Division of M/W Business Development shall work with each Reporting Agency to ensure the reporting of and ensure compliance with contract-specific contracting and subcontracting goals for the Reporting Agency that are consistent with the availability percentages set forth in Appendix D. These goals should incorporate good faith effort requirements and should be adjusted annually, consistent with the availability of minority and women-owned businesses for which significant disparities in utilization have been demonstrated in each business category.

10. Each Reporting Agency shall:

a. Inform the Division of M/W Business Development of contracting opportunities at the same time that it advertises or otherwise posts public notices of such opportunities, via consistent and timely upload of all-inclusive information to the bid opportunities database services managed by the Division of M/W Business Development. All pre-bid requirements shall be prominently advertised at the time of uploading to the Division of M/W Business Development databases;

b. Actively and regularly use the databases and other on-line services managed and operated by the Division of M/W Business Development to identify additional potential bidders. Because these databases and on-line services identify minority and women-owned businesses known to and registered or certified with the Division of M/W Business Development, the ongoing use of these resources by buyers, procurement agents, and other purchasing staff shall be closely monitored by the Reporting Agency's senior management;

c. Contact the businesses identified in the Division of M/W Business Development's databases and on-line services to provide them with notice of the contracting opportunities available through the Reporting Agency; and

d. Report to the Division of M/W Business Development all payments and awards prime contractors have issued to subcontractors, identifying payments and awards to minority and women-owned businesses on at least a quarterly basis.

11. To the maximum extent practicable, and when not restricted by any other State or federal law, each Reporting Agency shall incorporate the substance of the contractual language set forth in Appendix C into its contracts, while continuing to follow the particular State and federal laws and regulations governing its contracting and procurement practices.

12. Each Reporting Agency shall, where substitution of subcontractors or sub-consultants is permitted, promulgate policies governing the circumstances under which contractors or consultants may substitute subcontractors or sub-consultants named in bid proposals or otherwise identified as small or women or minority-owned business subcontractors, sub-consultants, or vendors ("Substitution Policies"). The Substitution Policies shall provide that:

a. The contractor or consultant must notify and obtain approval from a small or women or minority-owned business subcontractor, sub-consultant, or vendor ("SMWBE contractor") before including that contractor in a bid proposal or similar contract-related submission;

b. The contractor or consultant must notify and obtain authorization from the Reporting Agency before it substitutes a SMWBE contractor named in a bid proposal or other contract-related submission; and

c. If the substitution is approved, the contractor or consultant shall make a good faith effort to utilize another SMWBE contractor in place of the previous SMWBE contractor.

13. Each Reporting Agency shall report to the Division of M/W Business Development when it has incorporated the language set forth in Appendix C in its contracts. It shall also report to the Division of M/W Business Development when it has adopted its Substitution Policy, where such policy is permitted. The Division of M/W Business Development shall report on the number of Reporting Agencies that have modified their contracts and adopted a Substitution Policy at three month intervals until all of the Reporting Agencies have completed incorporation of the contractual language set forth in Appendix C and, where legally permitted, adoption of the Substitution Policy.

14. Nothing in this Order shall modify existing law, state or federal, or authorize a Reporting Agency to amend, modify, or otherwise alter pre-existing legal obligations. Further, this Order shall be interpreted consistently with the ARRA, and the federal regulations and guidelines governing its implementation, and in the event of a conflict between this Order and federal law governing ARRA, the Order shall be interpreted to comply with federal law.

15. Within 90 days of the date of this Order, the Division of M/W Business Development shall prepare a Contracting Guide identifying the management practices that have the greatest success in: (a) increasing the number of small and minority and women-owned businesses made aware of contracting opportunities with the State; and (b) increasing the number of such businesses competing for contracts with the state or subcontracts with entities contracting with the state. As soon as practicable thereafter, the Division of M/W Business Development shall distribute the Contracting Guide to the Reporting Agencies.

16. As soon as practicable after its receipt of the Contracting Guide, each Reporting Agency shall implement those provisions that it views as most likely to have the greatest impact in increasing contracting opportunities for small and minority and women-owned businesses.

17. Within one year and ninety days of the effective date of this Order, the Division of M/W Business Development and the Division of Contract Compliance shall each prepare a report describing the Reporting Agencies' implementation of this Order. The Division of M/W Business Development and the Division of Contract Compliance each shall prepare a second report within one year of issuing its first report.

18. The Department of Labor and Workforce Development shall work together with all other Reporting Agencies that will receive ARRA funding and with the representatives of the United States Environmental Protection Agency, the Federal Departments of Labor, Energy, Transportation, and Housing and Urban Development, and any other federal agencies distributing ARRA funds to:

- a. Coordinate with labor unions that will aggressively recruit minorities and women for apprenticeships and training opportunities;
- b. Increase outreach to and enrollment of minorities and women in apprenticeship, training, and related programs; and
- c. Ensure that, to the greatest extent possible under the law, minorities and women apprentices and trainees are working on State and ARRA-funded work sites.

19. The Department of the Treasury and other departments, agencies, and independent authorities shall, consistent with law, take steps to increase their engagement of small, minority, or women-owned or controlled banks and credit unions to meet their financial services needs.

20. This Order shall take effect immediately.

GIVEN, under my hand and seal this 28th day of August
Two Thousand and Nine, and of the Independence of
the United States, the Two Hundred and Thirty-Fourth.

/s/ Jon S. Corzine
Governor

[seal]

Attest:

/s/ Kay Walcott-Henderson
First Assistant Chief Counsel

APPENDIX A

LIST OF REPORTING AGENCIES

Board of Public Utility Commissioners
Casino Control Commission
Casino Reinvestment Development Authority
Commission on Higher Education
Commission on Science & Technology
Council on Affordable Housing
Department of Agriculture
Department of Military & Veterans' Affairs
Department of Banking & Insurance
Department of Children & Families
Department of Community Affairs
Department of Corrections
Department of Education
Department of Environmental Protection
Department of Health and Senior Services
Department of Human Services
Department of Labor and Workforce Development
Department of Law & Public Safety
Department of Public Advocate
Department of State
Department of Transportation
Department of the Treasury
Division of Property Management and Construction
Election Law Enforcement Commission
Fort Monmouth Economic Revitalization Planning Authority
Garden State Preservation Trust
Higher Education Student Assistance Authority
Kean University
Legalized Games of Chance Control Commission
Montclair State University
Motion Picture Commission
Motor Vehicle Commission
New Jersey City University
New Jersey Cultural Trust
New Jersey Institute of Technology
New Jersey Transit
NJ Building Authority
NJ Economic Development Authority
NJ Educational Facilities Authority
NJ Environmental Infrastructure Trust
NJ Health Care Facilities Financing Authority
NJ Highlands Council
NJ Housing & Mortgage Finance Agency
NJ Maritime Pilot and Docking Pilot Commission
NJ Meadowlands Commission
NJ Pinelands Commission
NJ Public Television & Radio (NJN) NJ Racing Commission NJ Redevelopment Authority
NJ Schools Development Authority
NJ Sports & Exposition Authority
NJ State Museum
NJ Turnpike Authority
NJ Water Supply Authority

North Jersey Transportation Planning Authority
North Jersey District Water Supply Commission
Office of Homeland Security
Office of Information Technology
Office of the Child Advocate
Office of the Inspector General
Office of the Public Defender
Ramapo College
Rowan University
Rutgers University
South Jersey Port Corporation
South Jersey Transportation Authority
South Jersey Transportation Planning Organization
State Agriculture Development Committee
State Economic Recovery Board For Camden
State Ethics Commission
State Employment & Training Commission
State Lottery Commission
Stockton College
The College of New Jersey
Thomas Edison State College
Transportation Trust Fund Authority
University of Medicine & Dentistry of New Jersey
William Paterson University

APPENDIX B

It is the policy of the [Reporting Agency] that its contracts should create a workforce that reflects the diversity of the State of New Jersey. Therefore, contractors engaged by the [Reporting Agency] to perform under a construction contract shall put forth a good faith effort to engage in recruitment and employment practices that further the goal of fostering equal opportunities to minorities and women.

The contractor must demonstrate to the [Reporting Agency]’s satisfaction that a good faith effort was made to ensure that minorities and women have been afforded equal opportunity to gain employment under the [Reporting Agency]’s contract with the contractor. Payment may be withheld from a contractor’s contract for failure to comply with these provisions.

Evidence of a “good faith effort” includes, but is not limited to:

1. The Contractor shall recruit prospective employees through the State Job bank website, managed by the Department of Labor and Workforce Development, available online at <http://NJ.gov/JobCentralNJ>.
2. The Contractor shall keep specific records of its efforts, including records of all individuals interviewed and hired, including the specific numbers of minorities and women.
3. The Contractor shall actively solicit and shall provide the [Reporting Agency] with proof of solicitations for employment, including but not limited to advertisements in general circulation media, professional service publications and electronic media.
4. The Contractor shall provide evidence of efforts described at 2 above to the [Reporting Agency] no less frequently than once every 12 months.
5. The Contractor shall comply with the requirements set forth at N.J.A.C. 17:27.

APPENDIX C

It is the policy of the [Reporting Agency] that small businesses (each a “small business enterprise” or “SBE”), as determined and defined by the State of New Jersey, Division of Minority and Women Business Development (“Division”) and the New Jersey Department of the Treasury (“Treasury”) in N.J.A.C. 17:14 et seq. or other application regulation, should have the opportunity to participate in [Reporting Agency] Contracts.

To the extent the Firm engages subcontractors or sub-consultants to perform Services for the [Reporting Agency] pursuant to this Contract, the Firm must demonstrate to the [Reporting Agency]’s satisfaction that a good faith effort was made to utilize subcontractors and sub-consultants who are registered with the Division as SBEs. Furthermore, the Reporting Agency shall be evaluated quarterly by the Division, based on its attainment of the Participation Goals set forth in the State of New Jersey Construction Services Disparity Study (October 2005) and the State of New Jersey Disparity Study of Procurement in Professional Services, Other Services, and Goods and Commodities (June, 2005). (These participation goals are set forth below.)

Evidence of a “good faith effort” includes, but is not limited to:

1. The Firm shall request listings of SBEs from the Division (609) 292-2146 and/or the [Reporting Agency] and attempt to contact same.
2. The Firm shall keep specific records of its efforts, including records of all requests made to the Division, the names of SBEs contacted, and the means and results of such contacts, including without limitation receipts from certified mail and telephone records. 3. The Firm shall actively solicit and shall provide the [Reporting Agency] with proof of solicitations of SBEs for the provision of Services, including advertisements in general circulation media, professional service publications and small business, minority-owned business or women-owned business focus media.
4. The Firm shall provide evidence of efforts made to identify categories of Services capable of being performed by SBEs.
5. The Firm shall provide all potential subcontractors and sub-consultants that the Firm has contacted pursuant to 2 or 3 above with detailed information regarding the scope of work of the subject contract.
6. The Firm shall provide evidence of efforts made to use the goods and/or services of available community organizations, consultant groups, and local, State, and federal agencies that provide assistance in the recruitment and placement of SBEs.

Furthermore, the Firm shall submit proof of its subcontractors’ and/or sub-consultants’ SBE registrations on the form attached as Exhibit __, and shall complete such other forms as may be required by the [Reporting Agency] for State reporting as to participation.

Participation Goals

1. Construction Services Contracts/Subcontracts (including new construction and renovations, except routine building maintenance; residential and non-residential building construction; heavy construction, such as streets, roads and bridges; and special trade construction, such as fencing, HVAC, paving and electrical).

(a) State Agencies/Authorities/Commissions

African Americans -- 6.3%
Asian Americans -- 4.34%

(b) State Colleges and Universities

African Americans -- 6.3%
Asian Americans -- 4.34%
Caucasian Females -- 12.67%

2. Construction-Related Services Contracts/Subcontracts (including design services, such as architectural, engineering and construction management services, that are performed as part of a construction project).

State Colleges and Universities

African Americans -- 4.51%
Asian Americans -- 7.11%
Hispanics -- 4.09%

3. Professional Services (with the exception of those professional services deemed to be construction-related, all services that are of a professional nature and requiring special licensing, education degrees and/or very highly specialized expertise, including accounting and financial services, advertising services, laboratory testing services; legal services; management consulting services; technical services and training).

State Agencies/Authorities/Commissions/Colleges and Universities

African Americans -- 2.47%
Asian Americans -- 1.47%
Hispanics -- 1.1%
Native Americans -- 0.07%
Caucasian Females -- 3.74%

4. Other Services (any service that is labor-intensive and neither professional nor construction-related, including, but not limited to equipment rental; janitorial and maintenance services; landfill services; laundry and dry cleaning; maintenance and repairs; printing; real property services; security services; special department supplies; subsidy, care and support; telecommunications; and temporary help).

State Agencies/Authorities/Commissions/Colleges and Universities

African Americans -- 1.22%
Asian Americans -- 0.85%
Hispanics -- 0.67%
Native Americans -- 0.05%
Caucasian Females -- 1.96%

5. Goods and Commodities (equipment and consumable items purchased in bulk, or a deliverable product including, but not limited to automobiles and equipment; chemicals and laboratory supplies, construction materials and supplies; equipment parts and supplies; fuels and lubricants; janitorial and cleaning supplies; office equipment; office supplies; radio equipment; special department supplies; technical supplies; tires and tubes; traffic signals; and uniforms).

State Agencies/Authorities/Commissions/Colleges and Universities

African Americans -- 2.71%
Asian Americans -- 1.74%
Hispanics -- 1.32%
Native Americans -- 0.10%
Caucasian Females -- 4.45%

Appendix D

Consistent with the findings of the State of New Jersey Construction Services Disparity Study (October 2005) and the State of New Jersey Disparity Study of Procurement in Professional Services, Other Services, and Goods and Commodities (June 13, 2005), each Reporting Agency should aspire to allocate a portion of its total contracting dollars in accordance with the following goals.

1. Construction Services Contracts/Subcontracts (including new construction and renovations, except routine building maintenance; residential and non-residential building construction; heavy construction, such as streets, roads and bridges; and special trade construction, such as fencing, HVAC, paving and electrical).

(c) State Agencies/Authorities/Commissions

African Americans -- 6.3%
Asian Americans -- 4.34%

(d) State Colleges and Universities

African Americans -- 6.3%
Asian Americans -- 4.34%
Caucasian Females -- 12.67%

2. Construction-Related Services Contracts/Subcontracts (including design services, such as architectural, engineering and construction management services, that are performed as part of a construction project).

State Colleges and Universities

African Americans -- 4.51%
Asian Americans -- 7.11%
Hispanics -- 4.09%

2. Professional Services (with the exception of those professional services deemed to be construction-related, all services that are of a professional nature and requiring special licensing, education degrees and/or very highly specialized expertise, including accounting and financial services, advertising services, laboratory testing services; legal services; management consulting services; technical services and training).

State Agencies/Authorities/Commissions/Colleges and Universities

African Americans -- 2.47%
Asian Americans -- 1.47%
Hispanics -- 1.1%
Native Americans -- 0.07%
Caucasian Females -- 3.74%

3. Other Services (any service that is labor-intensive and neither professional nor construction-related, including, but not limited to equipment rental; janitorial and maintenance services; landfill services; laundry and dry cleaning; maintenance and repairs; printing; real property services; security services; special department supplies; subsidy, care and support; telecommunications; and temporary help).

State Agencies/Authorities/Commissions/Colleges and Universities

African Americans -- 1.22%
Asian Americans -- 0.85%

Hispanics -- 0.67%
Native Americans -- 0.05%
Caucasian Females -- 1.96%

4. Goods and Commodities (equipment and consumable items purchased in bulk, or a deliverable product including, but not limited to automobiles and equipment; chemicals and laboratory supplies, construction materials and supplies; equipment parts and supplies; fuels and lubricants; janitorial and cleaning supplies; office equipment; office supplies; radio equipment; special department supplies; technical supplies; tires and tubes; traffic signals; and uniforms).

State Agencies/Authorities/Commissions/Colleges and Universities

African Americans -- 2.71%
Asian Americans -- 1.74%
Hispanics -- 1.32%
Native Americans -- 0.10%
Caucasian Females -- 4.45%

GIVEN, under my hand and seal this 28th day of August
Two Thousand and Nine, and of the Independence of
the United States, the Two Hundred and Thirty-Fourth.

/s/ Jon S. Corzine

Governor

[seal]

Attest:

/s/ Kay Walcott-Henderson

First Assistant Chief Counsel

Public Law 2013, Chapter 147

Effective August 19, 2013

AN ACT concerning contracting by State colleges and supplementing P.L.1986, c.43 (C.18A:64-52 et seq.).

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. [C.18A:64-76.2 Methods of withholding of payment.] Whenever any contract, the total price of which exceeds \$100,000, entered into by a State college, for the construction, reconstruction, alteration or repair of any building, structure, facility or other improvement to real property, requires the withholding of payment of a percentage of the amount of the contract, the contractor may agree to the withholding of payments in the manner prescribed in the contract, or may deposit with the State college registered book bonds, entry municipal bonds, State bonds or other appropriate bonds of the State of New Jersey, or negotiable bearer bonds or notes of any political subdivision of the State, the value of which is equal to the amount necessary to satisfy the amount that otherwise would be withheld pursuant to the terms of the contract. The nature and amount of the bonds or notes to be deposited shall be subject to approval by the State college. For purposes of this section, "value" shall mean par value or current market value, whichever is lower.

If the contractor agrees to the withholding of payments, the amount withheld shall be deposited, with a banking institution or savings and loan association insured by an agency of the Federal government, in an account bearing interest at the rate currently paid by such institutions or associations on time or savings deposits. The amount withheld, or the bonds or notes deposited, and any interest accruing on such bonds or notes, shall be returned to the contractor upon fulfillment of the terms of the contract relating to such withholding. Any interest accruing on cash payments withheld shall be credited to the State college.

2. [C.18A:64-76.3 Provision for partial payments.] Any contract, the total price of which exceeds \$100,000, entered into by a State college involving the construction, reconstruction, alteration, repair or maintenance of any building, structure, facility or other improvement to real property, shall provide for partial payments to be made at least once each month as the work progresses, unless the contractor shall agree to deposit bonds with the State college pursuant to section 1 of P.L.2013, c.147 (C.18A:64-76.2).

3. [C.18A:64-76.4 Withholding by State college pending completion of contract.]

a. With respect to any contract entered into by a State college pursuant to section 2 of P.L.2013, c.147 (C.18A:64-76.3) for which the contractor shall agree to the withholding of payments pursuant to section 1 of P.L.2013, c.147 (C.18A:64-76.2), 2% of the amount due on each partial payment shall be withheld by the State college pending completion of the contract.

b. Upon acceptance of the work performed pursuant to the contract for which the contractor has agreed to the withholding of payments pursuant to subsection a. of this section, all amounts being withheld by the State college shall be released and paid in full to the contractor within 45 days of the final acceptance date agreed upon by the contractor and the State college, without further withholding of any amounts for any purpose whatsoever, provided that the contract has been completed as indicated. If the State college requires maintenance security after acceptance of the work performed pursuant to the contract, such security shall be obtained in the form of a maintenance bond. The maintenance bond shall be no longer than two years and shall be no more than 100% of the project costs.

4. This act shall take effect immediately.

Approved August 19, 2013.

RAMAPO COLLEGE OF NEW JERSEY

ATTACHMENT TO APPLICATION FOR PAYMENT

Project Name President's Office Suite Alterations

R.C.N.J. Project Number 2014-24-03C

Application for Payment Number _____

I, _____, a prime contractor working for Ramapo College of New Jersey on the above mentioned project, hereby certify as required by P.L 1991, c. 507 of the State of New Jersey that (check all appropriate paragraphs):

☐ all my subcontractors and suppliers have been paid all amounts due from all previous progress payments I have received from Ramapo College of New Jersey for my work on this project;

☐ all my subcontractors and suppliers shall be paid all amounts due from this progress payment;

☐ all my subcontractors and suppliers shall be paid all amounts due from this progress payment with the exception of those listed below for which payment is being withheld as there exists a valid basis for those subcontractors and suppliers listed below under the terms of their contract(s) to withhold payment from each such subcontractor and supplier:

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

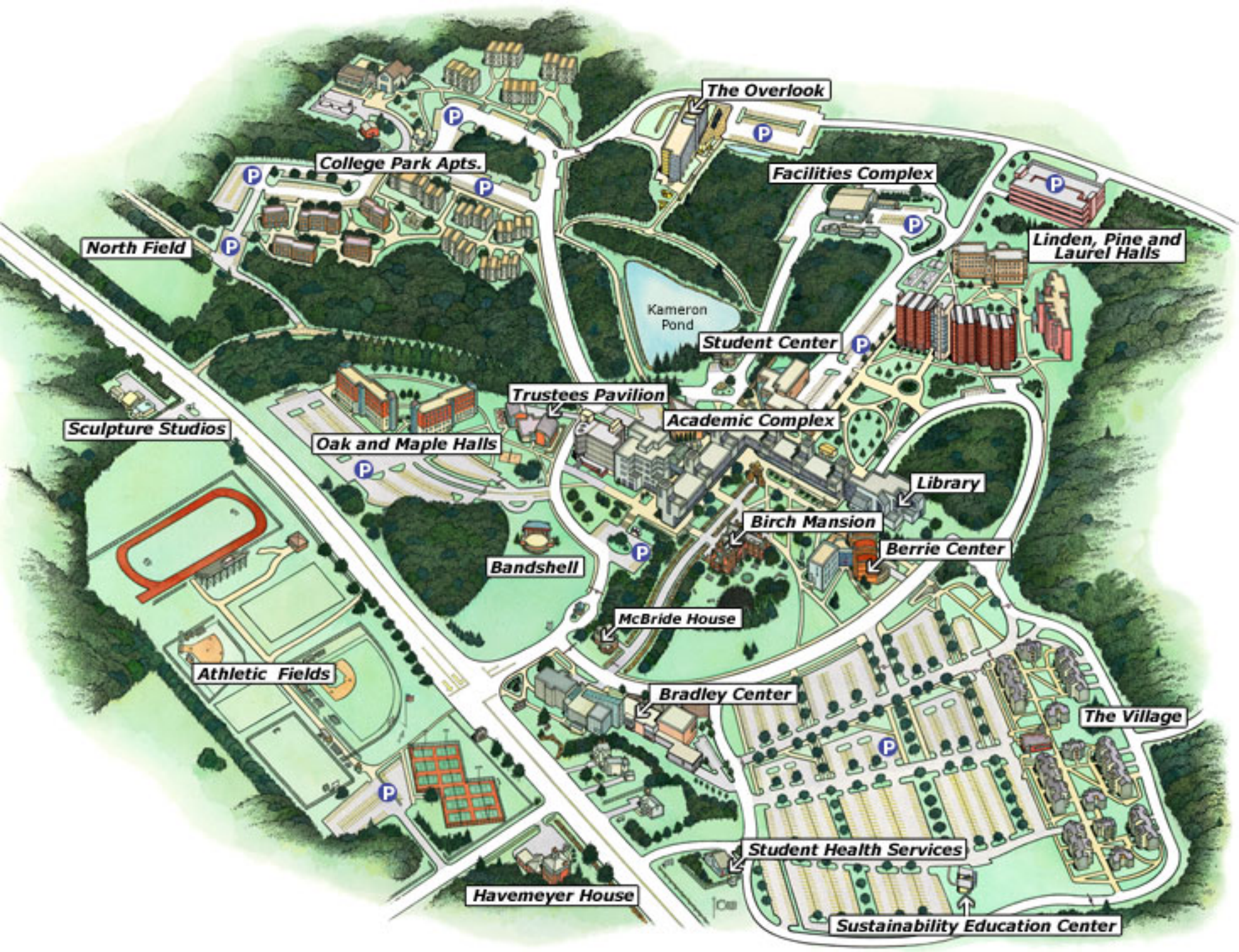
For each such subcontractor and supplier for which payment is being withheld, I further certify that written notice detailing the specific reason(s) for withholding payment has been provided to each such subcontractor and supplier with copies thereof provided to my performance bond company and Ramapo College of New Jersey.

Date

Signature

Print Name

Company Name



The Overlook

College Park Apts.

Facilities Complex

Linden, Pine and Laurel Halls

Student Center

Kameron Pond

Academic Complex

Library

Berrie Center

Birch Mansion

Trustees Pavilion

Oak and Maple Halls

Bandshell

McBride House

Bradley Center

The Village

Student Health Services

Sustainability Education Center

Havemeyer House

Athletic Fields

Sculpture Studios

North Field

Academic Complex

Academic Wings
Angelica and Russ Berrie Center for
Performing and Visual Arts
Anisfield School of Business
George T. Potter Library
MBA Classroom
Sculpture Studios
Sustainability Education Center

Administration/Operations

Facilities Complex
Birch Mansion
McBride House

Athletics

Athletic Fields
Bill Bradley Sports and
Recreation Center
Adele and Reuban Thomas
Swimming Pool
North Field
Arena
Auxiliary Gym

Residences

College Park Apartments
Oak and Maple Halls
The Overlook
Pine, Linden and Laurel Halls
The Village
Havemeyer House
Visiting Scholars Residence

Meeting and Conference Centers

Alumni Lounges
Board Room
Friends of Ramapo Hall
Trustees Pavilion
York Room

Food Services

Convenience Store at the
Thomases Commons
Curtain Call Cafe at the Berrie Center
Student Center (Marketplace at The
Birch Tree Inn)
Trustees Pavilion
Student Center (The Atrium)

The Arts

Angelica and Russ Berrie Center for
Performing and Visual Arts
The Bandshell
George T. Potter Library
Ramapo College Art Galleries
(Kresge Gallery, Pascal Gallery)
H-Wing Auditorium
Art Galleries

Student Services

Bill Bradley Sports and
Recreation Center
Fitness Center at the Lodge
J. Lee's Student Center
Robert A. Scott Student Center
Student Health Services

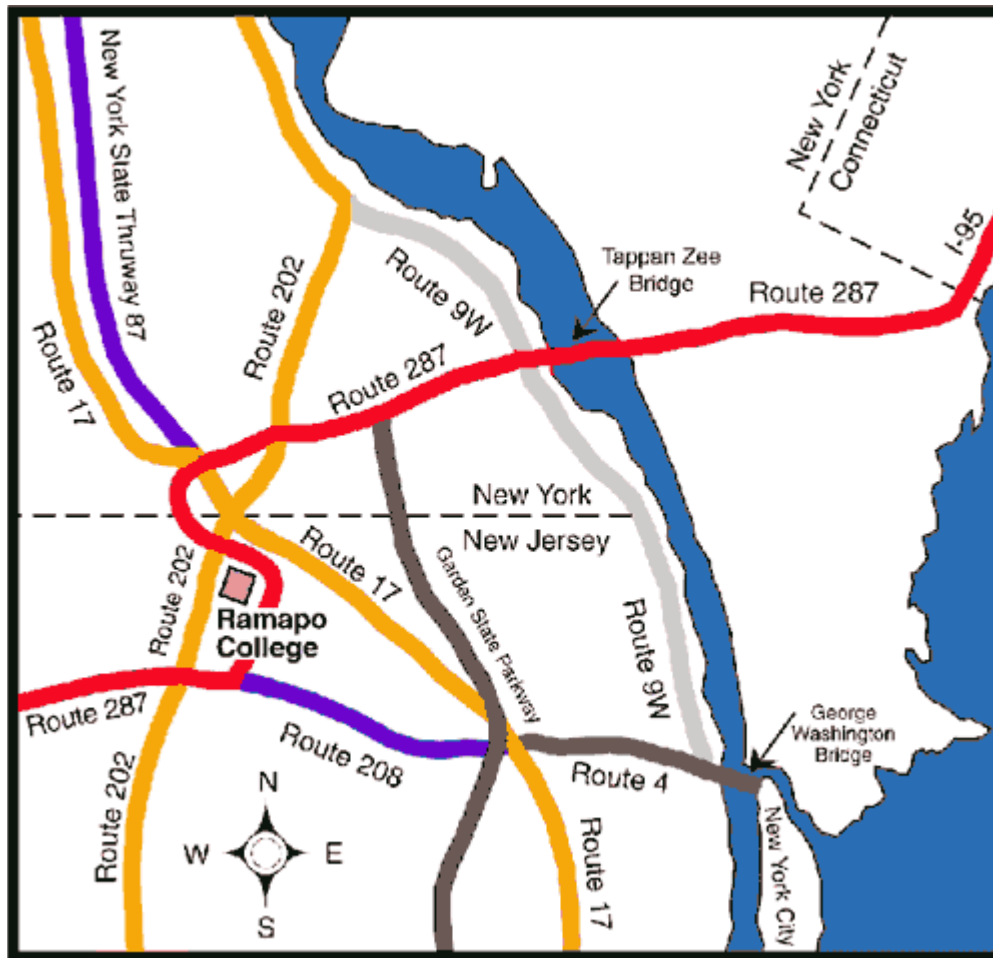
Directions to Ramapo College of New Jersey

Ramapo College of New Jersey

505 Ramapo Valley Road

Mahwah, New Jersey 07430-1680

Main Telephone Number (201) 684-7500



From the South:

- **Using Route 17:**
Follow Route 17 North to Mahwah to exit sign "202 Suffern/Morristown" on right. At the end of the short exit ramp turn left (202 South). Continue on 202 to light. Campus entrance is on left.
- **Using Garden State Parkway:**
Leave Parkway at exit 163 (left lane exit). Follow Route 17 North, using instructions above.

- **Using Route 208:**
Follow 208 North until Route 202 in Oakland. Continue north on 202 until first light in Mahwah. Campus entrance is on right.
- **Using Route 287:**
Route 287 North to exit 66 (Mahwah); follow Route 17 South to Route 202 exit. At the end of the exit ramp make left turn (202 South). Continue on Route 202 to light. Campus entrance is on left.
- **Using New Jersey Turnpike:**
Take N.J. Turnpike (I-95 North) to end (exit 18W or 18E). Continue North to Route 80 West to Route 17 North. Follow directions above using Route 17.

From the North

- **Using Route 17:**
Follow Route 17 South (approximately 1.5 miles from Suffern exit on N.Y. State Thruway). Turn right at Route 202 exit . At end of exit ramp, turn left (Route 202 South). Continue on Route 202 approximately 1 mile to light. Campus entrance is on left.
- **Using NY State Thruway:**
Take N.Y. State Thruway (87) South to Route 287 South (New Jersey) exit 15 (Suffern) onto Route 17 South. Follow directions above "From the North Using Route 17."
- **From Orange County:** Follow directions "From the North" using Route 17 (above).
- **From Westchester And Rockland Counties:**
Follow Route 287 West over the Tappan Zee Bridge to Route 17 South. Follow directions above "From the North Using Route 17."

From the East:

Follow Route 80 or Route 4 to Route 17 North. Follow directions above "From the South Using Route 17 North."

From the West:

Follow Route 80 East to Route 287 North to Mahwah exit 66, (south on Route 17 to 202 South).

From New York City:

Take the George Washington Bridge, Route 4 West to Route 17 North to 202 South.

From Connecticut:

Follow I-95 to Route 287 West over Tappan Zee Bridge, continue to exit 15 (Suffern) onto Route 17 South. Follow directions above "From the North Using Route 17."

WAGE RATE REQUIREMENT

NOTICE

TO ALL PUBLIC WORKS EMPLOYERS:

Please be advised that effective February 18, 1992 Regulation N.J.A.C. 12:60-2.1 and 6.1 of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq. requires that all public works employers shall submit a certified payroll record to the public body or lessor which contracted for the public work project each payroll period within ten (10) days of the payment of wages. The public body shall receive, file and make available for inspection during normal business hours the certified payroll records.

A copy of the certified payroll form may be obtained by contacting the New Jersey Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Public Contracts Section, 1 John Fitch Plaza, P.O. Box 110, Trenton, NJ 08625-0110, telephone (609) 292-2259.

rev (7-02)

THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT

Please be advised of legislation recently signed into law that will effect public advertisement for bids, solicitation of quotations and the award of certain public contracts, P.L. 1999, c. 238. "THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT" will become effective on April 11, 2000.

Contractors performing covered public work on the effective date must apply for registration within 30 days. Contractors not performing public work on the effective date of the Act must apply for registration before bidding on a public works contract. A copy of the completed and submitted registration application will establish eligibility for award for a period of 30 days.

For purposes of "THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT," "Public Works", is defined as "the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein, except that for purposes of the Act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public institution.

It is important to note that, any work subject to the New Jersey Prevailing Wage Act, (N.J.S.A. 34:11-56.25 et. Seq.), requires compliance with that Act as regards the payment of prevailing wage rates, postings, and completion and submission of certified payrolls, etc.

To avoid potential contract delays and completion extensions, it is suggested public body contracting units and their agents begin to include contractor registration language in advertisements for bids and solicitations for quotations. Evidence of contractor registration should be added to the list of requirements included in future bid specifications and confirmation of registration made on contracts awarded on and after April 11, 2000.

Registration Application Forms and copies of THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT may be obtained by contacting:

Contractor Registration Unit
New Jersey Department of Labor
Division of Wage & Hour Compliance
PO Box 389
Trenton, New Jersey 08625-0389
Telephone: (609) 292-9464
Fax: (609) 633-8591

Partial Close Out Check List for Projects		
Project Title:	President's Office Suite Alterations	
Project No:	2014-24-03C	
Check List for Project Close Out by Contractor:		
	Item	Date Received
<input type="checkbox"/>	Certificate of Occupancy	
<input type="checkbox"/>	Certificate of Substantial Completion – AIA G704	
<input type="checkbox"/>	Completed Punch List Items initialed by Contractor	
<input type="checkbox"/>	Affidavit of Payments of Debts & Claims – AIA G706	
<input type="checkbox"/>	Affidavit of Release of Liens – AIA G706A	
<input type="checkbox"/>	Consent of Surety to Final Payment – AIA G707	
<input type="checkbox"/>	Final Payment Application	
<input type="checkbox"/>	Attachment to Application for Payment – Form C115	
<input type="checkbox"/>	As-built Documents (record documents)	
<input type="checkbox"/>	Contractor's Warranty	
<input type="checkbox"/>	Manufacturer's Warranties (per the specifications)	
<input type="checkbox"/>	Owner's Manuals	
<input type="checkbox"/>	Owner's Set of Shop Drawings	
<input type="checkbox"/>	Binders (4), tabbed w/ Table of Contents, of Project Close Out documentation (above) enclosed	
<input type="checkbox"/>	Documents stamped with DCA review / released building permit drawings	
<input type="checkbox"/>	Owner's Instruction / Training, MEP	
<input type="checkbox"/>	Owner's Instruction / Training, A/V Controls, etc.	
<input type="checkbox"/>	Keys with room number tabs and transmittal by contractor	
<input type="checkbox"/>	Spare materials (per the specifications)	
<input type="checkbox"/>	All issued parking permits returned	

The above is a partial project close out check list. It should only be used as a guide to the minimal standards necessary for project close out and does not absolve the contractor from satisfying any and all other requirements and conditions of the contract documents.

All materials and Documentation must be delivered to the Architect.
(Spare materials shall be delivered to a location agreed upon between the A/E, contractor, and RCNJ Project Manager.)

I. INSTRUCTIONS TO BIDDERS

IB1 Bid Proposals

- IB1.1 The closing date and time for bids will be stated in the advertised Notice to Bidders.
- IB1.2 Bid proposals shall be properly completed and submitted on the standard form provided, enclosed in a sealed enveloped and must be delivered to, processed and time-stamped in accordance with the Notice to Bidders.
- IB1.3 Proposals not submitted and filed in accordance with instructions contained herein and in the advertisement for Bids may be considered informal and rejected as non-responsive.
- IB1.4 Award of Contracts or Rejection of Bids:
- a. Contracts will be awarded to the lowest responsible Bidder, fully responsive to the bid proposal.
 - b. The College reserves the right to reject any and all bids when such rejection is in the best interests of the College or if information or data is obtained which, in the opinion of the College, adversely affects the responsibility and/or the capability of the Bidder to undertake and to complete the work regardless of the Bidder's previous qualification or classification.
 - c. Alternates will be accepted or rejected in numerical sequence as cited in the Bid Documents and shall not be selected at random except as provided herein. Add alternates and deduct alternates will be specified separately. The College may choose from the add and deduct alternates without priority between the two groups so long as selection within each group is in numerical sequence from the first to the last.

IB2 Appeal Procedure

- IB2.1 The College shall provide to all qualified bidders a copy of a "Notice of Intent to Award a Contract" within sixty (60) days of a bid opening. Any bidder that wishes to protest the notice of award shall have three (3) business days from the date of receipt of said notification to file an appeal in writing.
- IB2.2 A bidder's notice of appeal shall set forth with particularity that such is an appeal and the reasons upon which the bidder takes issue with the contemplated award to the apparent lowest responsible bidder, attaching all documentation as appropriate.
- IB2.3 A panel will conduct a hearing within five (5) working days of the College's receipt of the appeal. A written decision will be rendered within seven (7) working days of the hearing set forth in this paragraph.
- IB2.4 The hearing will be conducted by a panel of three (3) College employees. Those members shall be: the Director of Facilities, the Director of Purchasing and the Contracting Officer or their designees. If any of the specifically enumerated employees is unavailable, another College employee shall be designated to hear the matter. The panel shall render a decision in the matter.

- IB2.5 The Contracting Officer shall preside at the hearing and shall vote. A determination of the panel shall be by a majority vote.
- IB2.6 The hearing shall be open to all bidders on the project. The bidder filing the appeal has the right to present witnesses and documents. The Contracting Officer may limit the number of witnesses to be heard. The panel may direct questions to the witnesses called by the appealing bidder or other project bidders present at the hearing if the panel deems necessary.
- IB2.7 Picture taking, filming or tape recording of the hearing, are prohibited.
- IB2.8 Attorneys may be present to assist and advise; not to offer testimony, question witnesses, make statements, or speak. Furthermore, attorneys may not interfere with the hearing.
- IB2.9 The College reserves the right to waive any immaterial defects in the bid or the bidding process.
- IB2.10 The decision of the panel is a final College decision.
- IB2.11 All appeals from the decision of the panel shall be appealable to the Appellate Division pursuant to N.J.S.A. 18A:3B-6(f).
- IB3** The Bidder to whom the award is made shall pay for and furnish a properly filled in and signed Performance Bond in statutory form (N.J.S.A. 2A:44-143 to 147) in an amount equal to one hundred percent (100%) of the total Contract Price as security for the faithful performance of this Contract and also a Payment Bond in statutory form in an amount equal to one hundred percent (100%) of the Contract Price as security for the payment of all persons and firms performing labor and furnishing materials in connection with this Contract. The Performance Bond and the Payment Bond forms supplied by the College must be used. No Contract shall be signed until acceptable bonds are furnished to the College.
- IB4** The contractor shall not assign the whole or any part of this contract without written consent of the Contracting Officer.
- IB5** Chapter 48 of the laws of 1954 makes it a misdemeanor to offer, pay or give any fee, commission, compensation, gift or gratuity to any person employed by the State. It is the policy of the State to treat the offer of any gift or gratuity by any company, its officers or employees, to any person employed by the State as grounds for debarment or suspension of such company from bidding on and providing work or materials on State contracts.

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

- 1.1 Architect/Engineer: the Architect or the Engineer (A/E) engaged by the College, lawfully licensed to practice architecture or engineering, or an entity lawfully practicing architecture or engineering. He is responsible for the design of this project and for certain project administration as identified in the Contract Documents.
- 1.2 Change Order: a written order to the Contractor, signed by the C.O. and the A/E, issued after the execution of the Contract, authorizing a Change in the Work, or an adjustment in the Contract Sum, or the Contract Time. The Contract Sum and the Contract Time may be altered only by a Change Order. A Change Order signed by the Contractor and the C.O. indicates an agreement which shall serve to adjust the Contract Sum and/or the Contract Time. A Change Order shall become a part of the Contract Document only after it is fully executed by the Contractor and the C.O.
- 1.3 Contract Documents: the Contract, the Instructions to Bidders, the Contractor's Bid Documents, the Conditions of the Contract (General, Supplementary and the other Conditions), the Drawings, the Specifications, the Interpretations and all Addenda issued prior to and all Modifications issued after execution of the Contract.
- 1.4 Contract Limit Lines: lines shown on the drawings, which limit the boundaries of the Project and beyond which no construction work or activities shall be performed by the Contractor unless otherwise noted on the Drawings or in the Specifications. Contractors are, however, responsible to check and verify reasonably observable conditions outside the Contract Limit Lines to determine whether any conflict exists with the Work they are required to perform under the Contract. This includes a check on elevations, utility connections, and the other site data. The Contractor shall notify the C.O. in writing of any conflicts in Work required outside those limits. All discrepancies or conflicts shall be brought to the attention of the C.O. prior to the execution of the Contract. In the absence of such notice, all required Work, as shown in the Specifications and on the Drawings, shall be performed at the Contract Cost.
- 1.5 Contracting Officer (C.O.): or his duly authorized representative refers to the public official charged with administering the design, engineering and construction projects for the College. He has the legal authority to administer the contract and represents the College in all relationships with contractors and the A/E. His status and responsibilities are further defined in Article 2.
- 1.6 Contractor: is the firm or individual responsible for performing the Work under the Contract, whether it be referred to as "Contractor," "Prime Contractor," "Prime," "Separate Contractor" or "Single Contractor." It does not include suppliers or materialmen. Also, see Section 4.6a. when separate contracts are awarded to several prime contractors.
- 1.7 Final Clean Up: the clean up and removal of debris and rubbish in preparation for substantial completion inspection by the C.O. and A/E. It shall include:
- a. Removal of all debris and rubbish resulting from or relating to his Work. Rubbish shall not be thrown from building openings above the ground floor unless contained within chutes.
 - b. Removal of all putty stains from glass and mirrors; wash and polish inside and outside.
 - c. Removal of marks, undesirable stains, other soil, dust and dirt from painted, decorated or stained woodwork, plaster or plasterboard, metal acoustical tile, and equipment surfaces.

- d. Removal of spots, paint, and soil from resilient, glazed and unglazed masonry and ceramic flooring and wall work.
- e. Removal of temporary floor protections; clean, wash or otherwise treat and/or polish, as directed, all finished floors.
- f. Clean exterior and interior metal surfaces, including doors and window frames and hardware, of oil stains, dust, dirt, paint, and the like.
- g. Restoration of all landscaping, roadways and walkways to preexisting conditions. Damage to trees and plantings shall be repaired in the next planting season, and such shall be guaranteed for one year from the date of repair or replanting.

- 1.8 Intent of the Contract: the Drawings and Specifications of the Contract are intended to require the Contractor to provide for everything reasonably necessary to accomplish the proper and complete finishing of the Work. All Work and Materials included in the Specifications and not shown on the Drawings, or shown on the Drawings and not in the Specifications, shall be performed by the Contractor as if described in both. Any incidental materials and/or work not specified in the Drawings and/or the Specifications which is, nevertheless, necessary for the true development thereof and reasonably inferable therefrom, the Contractor shall understand the same to be implied and required, particularly delineated or described therein. Should there be an obvious error or omission in the Drawings or Specifications, it shall be the Contractor's responsibility to complete the Work as reasonably required, consistent with the intent of such Drawings and Specifications as may be interpreted by the C.O.
- 1.9 Modification: (1) a written Amendment to the Contract signed by both parties, (2) a Change Order, (3) a written Interpretation issued by the Architect/Engineer, (4) a Bulletin, or (5) an Addendum.
- 1.10 State: the State of New Jersey.
- 1.11 Subcontractor: the individual or firm who has a direct contract with the Prime Contractor to perform any of the Work at the Site.
- 1.12 Substantial Completion: The Work (or a specified part thereof) has progressed to the point where, in the opinion of the C.O. and the A/E, the work is sufficiently complete in accordance with the Contract Documents so that the work (or specified part) can be utilized for the purpose for which it is intended.
- 1.13 Unit Schedule Breakdown: comprises a detailed list of the work activities required for project construction, other elements associated with fulfilling the requirements of the contract (bonds, insurance, etc.), major items of material or equipment and the prices associated therewith.
- 1.14 Work: comprises all construction efforts required by the Contract Documents and includes all supervision, labor, material and equipment necessary to complete such construction.

ARTICLE 2 - CONTRACTING OFFICER

- 2.1 The C.O. maintains general administration and direction of the Work. He shall exercise the duties and responsibilities consistent with the limitations of his authority and as set forth in the Contract Documents. He is the Interpreter of the Conditions of the Contract and the judge of its performance. He shall not take arbitrary positions benefiting either the College or the Contractor, but shall use his powers under the Contract to enforce its faithful performance by both.
- 2.2 Right to Stop Work. If the Contractor fails to correct defective Work or persistently fails to carry out the Work in accordance with the Contract Documents, the C.O. may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. All Stop Orders will be rendered in writing. Stoppage of the Work of one or more Contractors, however, shall not render the College liable for claims of any kinds, including delays sustained by the Contractor as the result of the stoppage of the Work of another Contractor.
- 2.3 Right to Terminate for Cause. The C.O., without any prejudice to any right or remedy, and after giving the Contractor and his Surety three (3) days written notice to forthwith commence and continue correction of such default or neglect with diligence and promptness, may terminate the employment of the Contractor for any one or more of the following reasons:
- a. The Contractor is adjudged bankrupt or makes a general assignment for the benefit of his creditors or if a receiver is appointed on account of his insolvency.
 - b. The Contractor persistently or repeatedly refuses or fails to furnish enough properly skilled workmen or proper materials so as to eliminate or avoid delays in the orderly progress of the Work in accordance with the approved schedule.
 - c. The Contractor persistently disregards laws, ordinances, rules, regulations or orders of the C.O. or any public authority having jurisdiction over the Contract.
 - e. The Contractor or any of his Subcontractors is guilty of a substantial violation of a provision of the Contract Documents.
 - f. The Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents.
- 2.3.1 Upon such termination for cause, the C.O. may take possession of the site and of all the materials, equipment, and the tools on site, and may finish the Work by any method which he may deem to be expedient. In this event the Contractor shall not be entitled to receive any further payment until the Work is finished. The firm or person designated to carry out such work will be paid as authorized by the C.O. without his having entailed any personal liability upon the officers of the College issuing the certificates of payment.
- 2.4 Right to Terminate for Convenience. The C.O. reserves the right to terminate for the convenience of the College in which case the Contractor shall be entitled to a proportion of the fee which the services actually and satisfactorily performed by it shall bear to the total services contemplated under this agreement, less payments previously made, together with appropriate reimbursable costs and a reasonable termination fee to be negotiated between the Contractor and the C.O.
- 2.5 The C.O. will be represented on the construction site by engineers and project observers or other designated representatives.

Review of Contractor Claims and Disputes. Upon presentation by the Contractor of a request in writing, the C.O. may review any decision or determination of the College or the A/E as to any claim, dispute or any other matter in question relating to the execution or progress of the Work or the interpretation of the Contract Documents. The proceedings will be referred to as the C.O.'s level settlement conferences and represents the highest level for administrative settlement of a contractor claim or dispute. Consistent with the intent of this contract, the C.O. may schedule a conference for the purpose of setting or resolving such claims, disputes or other matters. Where such a conference is conducted, the Contractor shall be afforded the opportunity to be heard on the matter in question. Following review of the Contractor's request the College and the Contractor may settle or resolve the disputed matter, provided however that any such settlement or resolution shall be subject to all requirements imposed by law, including where applicable, the New Jersey Contractual Liability Act, N.J.S.A. 59:13-1 et. seq.

ARTICLE 3 - ARCHITECT/ENGINEER

- 3.1 The A/E may issue written Interpretations necessary for the proper execution of progress of the Work, in the form of Drawings or otherwise. Such interpretations will be consistent with, and reasonably inferable from, the Contract Documents.
- 3.2 The A/E will at all times be provided access to the Work. The Contractor shall provide facilities for such access so as to enable the A/E to perform his functions under the Contract Documents.
- 3.3 The A/E will not be responsible for or have control or charge of construction means, methods, techniques, sequences of procedures, or safety precautions and programs in connection with the Work. The A/E will not be responsible for or have control over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other person performing any of the Work, but shall have the obligation to immediately inform the C.O. of any inadequate performance on the project.
- 3.4 The A/E will recommend rejection of Work which he believes does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable, he may request the C.O. to provide a special inspection or testing of the Work, whether or not such Work has been fabricated, installed or completed.
- 3.5 The A/E will review, approve or take other appropriate action relating to Contractor's submittals, such as Shop Drawings, Product Data and Samples, to assure conformance with the design requirements and the Plans and Specifications of the Work. Such actions shall be taken with reasonable promptness. Approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- 3.6 The A/E will conduct inspections, accompanied by the Contractor and the C.O.'s authorized representatives, to determine the dates of Substantial and Final Completion; will develop punch lists and monitor corrections; will receive and forward to the C.O. for his review, written warranties and related documents required by the Contract Documents and assembled by the Contractor, and will approve the issuance of a Certificate of Final Completion.

ARTICLE 4 - THE CONTRACTOR

- 4.1 Review of Contract
- 4.1.1 The Contractor has the duty and warrants and represents that he has thoroughly examined and is familiar with all the Contract Documents, that he has noted cases where it is specified that certain work or materials, or both, are to be omitted by one Contractor and to be furnished or installed by another; that he has carefully examined the site and the Contractor from his own investigations has satisfied himself as to the nature and location of the Work, the current local equipment labor and material conditions, and all matters which may in any way affect the Work or its performance. The Contractor warrants and represents that he fully understands the intent and purposes of the Contract Documents and his obligations thereunder and that he accepts responsibility for, and is prepared to execute and fulfill completely, by his construction work, the intent of the Contract, without exception and without reservation, at the price and within the time specified in the Contract.
- 4.1.2 Each Contractor shall abide by and comply with the true intent and meaning of the Drawings, the Specifications and other Contract Documents taken as a whole, and shall not avail himself of any unintentional error or omission, should any exist. Should any error, omission or discrepancy appear, or should any doubt exist, or any dispute arise as to the true intent and meaning of the Drawings, the Specifications or other Contract Documents, or should any portion thereof be obscure, or capable of more than one interpretation, the Contractor shall immediately notify the A/E and seek correction or interpretation thereof. If the error, discrepancy, omission or conflict is discovered prior to the final date for opening of the bids, the Contractor forfeits his right to make a claim against the College unless he has requested a clarification, interpretation or correction from the A/E or C.O. prior to the bid opening.
- 4.1.3 The Contractor shall carefully study and compare the Contract Documents during the progress of the Work. The Contractor shall immediately, but not later than ten (10) calendar days, report in writing any error, inconsistency or ambiguity detected during the course of the project to the C.O. and shall do no work thereafter which may be affected by such error until the C.O. has had the opportunity to respond to and clarify the work he wants performed in view of this information. Wherever any error, inconsistency or omission appears, it shall be disposed of pursuant to appropriate procedures set forth elsewhere herein.
- 4.2 Unless otherwise ordered in writing by the C.O., the Contractor shall perform no portion of the Work without approved Change Orders, approved Shop Drawings or Samples for such portions of the Work, or other approvals or direction as may be applicable and required by the Contract Documents.
- 4.3 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, equipment, material, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for the proper execution and completion of the Work, whether or not incorporated or to be incorporated in the Work.
- 4.4 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the task assigned to him.
- 4.5 The Contractor shall be obliged to pay the prevailing wage rates set forth in the specifications. He shall abide by the requirements of the State's Affirmative Action Program. He also shall be responsible to insure that all principles of Safety are carried out as further described in Article 9 herein.

- 4.6 New Jersey Prevailing Wage Act. Each Contractor or any Subcontractor shall comply with the New Jersey Prevailing Wage Act, Laws of 1963, Chapter 150, and all amendments thereto, and this Act is hereby made a part of every Contract entered into on behalf of the State.
- a. In the event it is found that any workman, employed by any Contractor or any Subcontractor covered by any Contract in excess of \$2000 has been paid a rate of wages less than the Prevailing Wage required to be paid by such Contract, the C.O. shall terminate the Contractor's or Subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and may otherwise prosecute the work to completion.
 - b. Nothing contained in the Prevailing Wage Act shall prohibit the payment of more than the prevailing wage rate to any workman employed on a public work.
- 4.7 Supervision and Construction Procedures
- 4.7.1 The Contractor shall supervise and direct the Work using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.
- 4.7.2 Each Contractor shall employ qualified competent craftsmen in their respective lines of work.
- 4.8 Responsibility for the Work
- 4.8.1 The Contractor shall be responsible to the C.O. and to Separate Contractors having a Contract with the College on this Project, for the acts and omissions of his employees, Subcontractors and their agents and employees which injure, damage or delay such other Contractors in the performance of their Work. This responsibility is not limited by the applicable provisions stated elsewhere herein, but is in conjunction with, and related thereto.
- 4.8.2 Each Contractor shall be responsible for all damages or destruction caused directly or indirectly by his operations to all parts of the Work, both temporary and permanent, and to all adjoining property.
- 4.8.3 Each Contractor shall, at his own expense, protect all finished Work liable to damage and keep the same protected until the Project is completed and accepted. In the case of Substantial Completion accompanied by Beneficial Occupancy by the College, the Contractor's obligation to protect his finished Work shall cease simultaneously with the occupancy of that portion or portions of the structure.
- 4.8.4 Each Contractor shall defend, protect, indemnify and save harmless the College from all claims, fines, penalties, suits, actions, damages and costs of every name and description arising out of, or resulting from, the performance of his Work under this Contract. This responsibility is not limited by the provisions of other indemnification provisions included elsewhere herein.
- 4.9 Permits--Laws--Regulations
- 4.9.1 Unless otherwise provided in the Contract Documents, the College shall secure and pay for all permits, governmental fees, licenses and inspections necessary for the proper execution and completion of the Work and which are legally required at the time of receipt of bids. Cost of construction permits is secured by contractor and reimbursed by College upon submission of substantiated payment.

- 4.9.2 All general construction, plumbing and electrical work is to be done in accordance with the New Jersey Uniform Construction Code. No work requiring inspections and approval of construction code officials is to be covered or enclosed prior to inspection and approval by appropriate code enforcement officials.
- 4.9.3 On State and College owned buildings, Work under the Contract is exempt from local ordinances, codes and regulations as related to the building and the site on which it is located, except where construction could adversely affect adjacent property, public sidewalks and/or streets. The Contractor shall coordinate his activities with municipal and/or highway authorities having appropriate jurisdiction.
- 4.9.4 On State and College owned buildings, the State will conduct all code inspection. However, it is each Contractor's responsibility to request inspections from the authority having jurisdiction as defined in the New Jersey Uniform Construction Code.
- 4.10 Storage, Cleaning and Final Clean Up
- 4.10.1 Each Contractor shall confine his apparatus, the storage of his equipment, tools and materials, and his operations and workmen to areas permitted by law, ordinances, permits, contract limit lines as established in the Contract Documents, the rules and regulations of the College or as ordered by the C.O. and shall not unreasonably encumber the site or the premises with his materials, tools and equipment.
- 4.10.2 Each Contractor shall at all times during the progress of the work keep the premises and the job site free from the accumulation of all refuse, rubbish, scrap materials and debris caused by his operations, to the end that at all times the premises and site shall present a neat, orderly and workmanlike appearance. This is to be accomplished as frequently as is necessary by the removal of such material, debris, etc. from the site and the College's premises. Loading, cartage, hauling and dumping will be at the Contractor's expenses.
- 4.10.3 Should any Contractor fail to promptly and properly discharge his obligation relating to Storage, Cleaning and Final Clean Up, the Contracting Officer shall have the right to employ others and to charge the cost thereof to the Contractor(s) deemed by the C.O. to be responsible therefore, after first having given the Contractor a three (3) working day written notice of such intent.
- 4.11 Drawings, Specifications, Shop Drawings, As-Built Drawings
- 4.11.1 The C.O. will furnish, after he becomes aware of its need, additional instructions for the proper execution of the Work. All drawings and instructions issued by the C.O. shall be consistent with the Contract Documents and reasonably inferable therefrom. The work shall be executed in conformity therewith. The Contractor shall do no work without proper drawings and instructions.
- 4.11.2 No Contractor shall, at any time after the execution of his contract, make any claims whatever based upon insufficient data or his incorrectly assumed conditions, nor shall he claim any misunderstandings with regard to the nature, conditions or character of the work to be done under the Contract and he shall assume all risks resulting from any changes in conditions not under the control of the College which may occur during the progress of the work.
- 4.11.3 The Contractors shall keep one set of D.C.A. released building permit drawings on the project at all times. They shall, during the course of the project, be marked with colored pencils to reflect any changes in dimensions and the location of all pipe runs, conduits, traps, footing depths or any other information not already shown on the drawings or differing therefrom. All buried utilities outside the building shall be located by a metes and bounds survey performed by a licensed surveyor who shall certify as to its accuracy. These marked-up drawings and surveys shall be

known as "As-Builts" and shall be made available to the C.O. at any time during the progress of the work, upon his request. These shall include the drawings of principal subcontractors as well.

4.11.4 Each Contractor shall submit the "As-Builts" documents to the A/E whether altered or not, with a certification as to the accuracy of the information thereon at the time of contract completion and before release of retainage will be made to the Contractor. After acceptance by the A/E, the Contractor will furnish two (2) sets of all shop and/or erection drawings used for "As-Builts" documentation.

4.12 Samples. Each Contractor shall furnish, for approval, all Samples as directed. The Work shall be in accordance with approved Samples. Such Samples shall be submitted promptly to the C.O., through the A/E at the beginning of the Work, so as to give the C.O. time to examine them. Any list of Samples prepared by the A/E is for the C.O.'s convenience only, and shall not be construed as limiting the number of Samples which the Contractor shall furnish upon request of the A/E.

4.13 Equipment--Materials

4.13.1 The Contractor warrants to the C.O. and the A/E that all materials and equipment furnished under the Contract will be new, unless otherwise specified, and that all Work will be of good quality, free from faults, defects, and in conformance with Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective and rejected by the C.O. or the A/E. If required by the A/E or the C.O., the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty is not limited by the provisions of the other paragraphs contained therein.

4.13.2 Manufactured products of the United States, whenever available, shall be used in this work. Wherever practicable, preference shall be given at all times to material and equipment manufactured or produced in the State of New Jersey.

4.13.3 No materials, equipment or supplies for the Work shall be purchased by the Contractor or any Subcontractor subject to any lien or encumbrance or other agreement by which an interest is retained by the Seller. The Contractor warrants, by signing his requisition for payment, that he has good and sufficient title to all such material, equipment and supplies used by him in the Work, free from all liens, claims or encumbrances.

4.14 Substitutions

4.14.1 In some cases, it is in the best interest of the College to restrict the product, material or equipment to a certain manufacturer(s) whose name will be cited in the Specifications and the phrase "or approved equal" will not appear. In such cases, no substitution will be accepted in lieu of the stipulated product.

4.14.2 In the event that a Contractor should propose a Substitution for the specified equipment or materials, it shall be his responsibility to submit proof of equality and to provide and pay for any tests which may be required by the C.O. to convince himself of the same.

4.14.3 Where any particular brand or manufactured article is specified, it shall be regarded as a standard. Similar products of other manufacturers, capable of equal performance or quality, in the opinion of the C.O. may be accepted, if approved.

4.14.4 On the forms furnished by the College, the application for approval of a substitution by the Contractor shall include the following information:

- a. Identify where within the Specifications the item is stipulated.
 - b. Provide information in detail as to how and why the proposed substitution is equal or better than the specified item. Include how the substitution differs, if at all, from the product required under the Contract. Submit certification that substituted item is equal to the specified item, that the proposed item will not prejudice contractor's achievement of substantial completion on time, that Contractor will pay for all excess fees and costs that the substituted item may have on the other contractors' work.
 - c. When requesting approval of an out-of-State manufacturer or supplier, the Contractor shall furnish a statement to the effect that every reasonable effort was made to find and employ New Jersey firms and/or materials and equipment at comparable costs, terms and performance qualities.
- 4.14.5 When an item is offered as a substitution and the A/E finds it to be unacceptable as an equal, it will be rejected. It is the responsibility of the Contractor prior to the Submission of his bid to request the A/E to rule on the acceptability of the item as an equal or better. If the item should be accepted as an equal, all bidders shall be notified.
- 4.14.6 If the proposed substitution involves a change in the scope of the Work of this or any other Contractor or trade under the Contract Documents, then, and in that event, the Contractor requesting approval undertakes and agrees to be responsible for any and all added costs involved by reason of the change in the Work, whether they be his or that of other Contractors or trades, including redesign costs, if any.
- 4.14.7 Any test performed to prove that the proposed substitution is equal to the specified item shall be at the Contractor's own expenses.
- 4.14.8 No Contractor shall base his bid on substitutions which may have been approved on previous projects. Bids shall be based solely on the Plans and Specifications as set forth in these Contract Documents.
- 4.15 Subcontractor Approvals. Approval by the C.O. and A/E of a Subcontractor or Material Supplier shall not relieve the Contractor of the responsibility of complying with all provisions of the Contract Documents. The approval of a Subcontractor does not imply approval of any material, equipment or supplies.

ARTICLE 5 - SUBCONTRACTORS

- 5.1 Each Contractor shall, within ten (10) days after award of the Contract, notify the C.O. through the A/E, in writing, of the names of Subcontractors, other than those required to be listed in the bid, proposed to perform the principal parts of the Work and of such others as the C.O. may direct, and shall not employ any Subcontractor without prior written approval of the C.O., or any that the C.O. may, with a reasonable time, reject. Failure of C.O. to reply to the subcontractor submission within fifteen (15) days of receipt of such names shall constitute notice of approval.
- 5.2 If the C.O. has reasonable objection to any such proposed person or firm, the Contractor shall substitute another Subcontractor to which the C.O. has no reasonable objection. Under no circumstances shall the College be obligated for additional cost due to such substitution.
- 5.3 The Contractor shall make no substitution for any Subcontractor, person or firm previously selected and approved, without written notification to the C.O. and receipt of his written approval for such substitution.
- 5.4 Each Contractor acknowledges his full responsibility to the College for the acts and omissions of his Subcontractors, and of persons and firms either directly or indirectly employed by them, equally to the extent that he is responsible for the acts and omissions of persons and firms directly or indirectly employed by him and each Contractor acknowledges he remains fully responsible for the proper performance of his Contract irrespective of whether Work is performed by his own forces or Subcontractors engaged by him.
- 5.5 Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the College.

ARTICLE 6 - RELATIONSHIP BETWEEN COLLEGE AND PRIME CONTRACTORS

- 6.1 The College may, and reserves the right to, enter upon the premises at any and all times during the progress of the Work, or cause others to do so for the purpose of installing any apparatus or carrying on any construction not included in these Specifications or for any other reasonable purpose.
- 6.2 Substantial Completion
- 6.2.1 At the request of the College, the A/E, Contractor and C.O. shall make a joint inspection of the Work, and if all determine that the work is substantially completed, the College shall give Notice of Substantial Completion for Beneficial Use. Such certification in no way relieves the Contractor of any contractual obligation or in any way relieves the Contractor from responsibility to promptly complete punch list work.
- 6.2.2 Standard Guarantee period for equipment, workmanship and materials shall commence on the date of acknowledgment of substantial completion of the project or portions thereof so certified or from the time of completion and acceptance of equipment, work or materials in question, whichever is later, unless specified to the contrary as a condition of partial acceptance.
- 6.3 Beneficial Occupancy. The College reserves the right to take possession and occupy any and all portions of the premises prior to the completion of the Work without waiving any provisions or requirements of the Contract. Prior to such occupancy, however, representatives of the C.O. and the Contractor shall fully inspect portions of the building to be occupied, preparing a complete list of incomplete or faulty Work to be completed/corrected by the Contractor. The C.O. will assume responsibility for maintenance and operating costs of the premises to be occupied.
- 6.4 Contractor's Claims for Damages
- 6.4.1 Any claims made by a Contractor against the College for damages or extra costs are governed by and subject to the New Jersey Contractual Liability Act, N.J.S.A. 59:13-1 et. seq. as well as all the provisions in this contract.
- 6.4.2 Should any Contractor or A/E having, or who shall hereafter have, a Contract with the College, by his own acts, errors or omissions, damage or unnecessarily delay the Work of any Contractor(s) or the A/E by not properly cooperating with them, or by not affording them reasonably sufficient opportunity or facility to perform Work as may be specified, by reason of which act, error or omission of the said Contractor, the A/E or any other Contractor shall sustain damages, including delay damages, during the progress of the Work hereunder, then and in that event, the culpable party agrees to pay all costs and expenses incurred by the damaged Contractor(s) or A/E due to any such delays and/or damages whether by settlement, compromise or arbitration and the injured Contractor or A/E shall have a right of redress enforcement in court directly against the culpable party. In addition, the culpable party further agrees to defend, indemnify and save harmless the College from all such claims and damages. Nothing contained in this paragraph shall be construed to relieve the culpable Contractor or A/E from any liability or damage sustained on account of such acts, errors or omissions.
- 6.4.3 The College shall not be liable to any contractor for any damages or extra costs caused by any acts or omissions as specified in this paragraph and the contractor's exclusive remedy shall be against the culpable party.

6.5 Differing Site Conditions

6.5.1 The Contractor shall promptly, and before the conditions of the site are disturbed, give a written notice to the C.O. of subsurface or latent physical conditions at the site which materially differ from those indicated in the Contract or unknown physical conditions at the site of an unusual nature which materially differ from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.

6.5.2 The C.O. shall investigate the site conditions promptly after receiving notice. If the Conditions do materially so differ and cause an increase or decrease in the Contractor's costs of, or the time required for, performing any part of the Work under this Contract, an equitable adjustment shall be made under this clause and the Contract modified in writing accordingly.

6.5.3 No request by the Contractor for an equitable adjustment to the Contract under this clause shall be allowed unless the Contractor has given the written notice required; provided that the time prescribed above for giving written notice is otherwise extended by the Contracting Officer.

6.5.4 No request by the Contractor for an equitable adjustment to the Contract for differing site conditions shall be allowed if made after final payment under this Contract.

6.6 Right to Accelerate. The C.O. may order and direct the Contractor responsible for delay as may be apparent as a result of his observation of the work, to accelerate that Contractor's Work at any particular place or places by increasing his forces, working overtime and/or on Saturdays, Sundays and holidays as may be required to enable others to carry on with their Work in accordance with the Project Progress Schedule. The Cost of such acceleration efforts shall be borne entirely by the responsible Contractor and shall not be billed to the College.

6.7 Time of Completion--Delay--Liquidated Damages. In the event of the failure of the Contractor to complete the said work within the time stated in his proposal, the Contractor shall be liable to the College in the sum of one hundred (\$100) dollars per day, or the sum equal to 1/20th of one percent (.0005) of the total consideration provided for under this contract, per day, whichever is greater for each and every day that the said work shall be and remains incomplete, which said sum shall be treated as liquidated damages and not a penalty, for the loss to the College of the use of premises in a completed state of construction, alteration or repair, as the case may be, and for added administrative and inspection costs to the College on account of the delay; provided, however, that the said liquidated damages provided for herein shall be in addition to other consequential losses or damages that the College may incur by reason of such delay, such as, but not limited to, added costs of the project and the cost of furnishing temporary services, if any. Any such sums for which the Contractor is liable may be deducted by the College from any moneys due or to become due to the Contractor.

6.8 No Damages for Delay

6.8.1 The College shall have the right to defer the beginning or to suspend the whole or any part of the Work herein contracted to be done whenever, in the opinion of the C.O., it may be necessary or expedient for the College so to do. And if the Contractor be delayed in the completion of the Work by act, neglect, or default of the College, of the A/E, or of any other Contractor employed by the College upon the work, or by changes in the work, or by

strikes, lockouts, fire, unusual delay by common carriers, unavoidable casualties, or any case beyond the Contractors' control, or by any cause which the C.O. shall decide to justify the delay, then for all such delays and suspensions the Contractor shall be allowed one day addition to the time herein stated for each and every day of such delay so caused in the completion of the work as specified in Article 6.7, the same to be determined by the C.O., and a similar allowance of extra time will be made for such other delays as the C.O. may find to have been caused by the College. No such extension shall be made for any one or more of such delays unless within ten (10) days after the beginning of such delay a written request for additional time be made by the Contractor.

6.8.2 The Contractor shall not be entitled to any damages or extra compensation from the College on account of any work performed by the College or any other Contractor or the A/E or any other party, or by reason of any delays whatsoever, whether caused by the College or any other party, including but not limited to the delays mentioned in this Contract.

6.9 Indemnification. The Contractor shall assume all risk of and responsibility for, and agrees to indemnify, defend and save harmless the College, the State of New Jersey, and employees of both from and against any and all claims, demands, suits, actions, recoveries, judgments and costs and expenses in connection therewith on account of the loss of life, property or injury or damage to the person, body or property of any person or persons whatsoever, resulting from the performance of the Project or through the negligence of the Contractor or through any improper or defective machinery, implements or appliances used by the Contractor in the project, or through any act or omission on the part of the Contractor or his agents, employees or servants, which shall arise from or result directly or indirectly from the work and/or materials supplied under this contract. This indemnification obligation is not limited by, but is in addition to, the insurance obligations contained in this agreement.

6.9.1 In any and all claims against the College or the A/E or any of their agents or employees by any employees of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the Indemnification obligation under this Section shall not be limited in any way as to the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Worker's or Workman's Compensation Acts, Disability Benefit Acts, or other Employee Benefit Acts.

ARTICLE 7 – PAYMENTS

- 7.1 Payments and Completion. The Contract Sum is stated in the Contract and, including authorized adjustments thereto, is the total amount payable by the C.O. to the Contractor for the performance of the Work under the Contract Documents.
- 7.2 Unit Schedule Breakdown
- 7.2.1 Before the first requisition for payment, the Contractor shall submit to the C.O. through the A/E, a schedule of prices allocated to the various portions of the Work. This is known as the Unit Schedule Breakdown. It shall be prepared in such form and be supported by data in sufficient detail as to substantiate its accuracy as the C.O. may require. The schedule, as approved by the C.O. shall be used only as a basis for the Contractor's Requisitions for Progress Payments for Work satisfactorily completed and installed.
- 7.2.2 The basis for computing Monthly Progress Payments shall be the Unit Schedule Breakdown.
- 7.3 The Contractor will submit his Requisition for Payment to the C.O.'s Project Representative. The Project Representative will indicate his approval or make appropriate changes and forward the requisition to the A/E. The A/E will review the Requisition and make his recommendation to the C.O. for payment. If the A/E does not recommend approval of the invoice as submitted, he will immediately advise the Contractor. If agreement cannot be reached within five (5) days, the Requisition, together with the A/E recommendation, will be sent to the C.O. for his decision and appropriate action. The College will make all reasonable efforts to make payment within sixty (60) days after final determination of amount due.
- 7.4. Recommendation for Approval of a Requisition for Payment will constitute a representation by the A/E to the C.O. based on his inspections at the site and data contained in the Requisition for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the work is in accordance with the Contract Documents; and that the Contractor is entitled to payment in the amount certified. By recommending approval of requisition for payment, however, the A/E shall not thereby be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, or that he has reviewed the construction means, methods, techniques, sequences or procedures, or that he has made any examination to ascertain how and for what purpose the Contractor has used the monies previously paid on account of the Contract Sum.
- 7.5 Retainage. In making such progress payments for Work, the College will retain two percent (2%) of the approved completed and stored to date amount. If the Contractor provides a retainage bond in the amount of 2% of the total contract value, the 2% retainage will not be retained. Payment of retainage held, or release of retainage bond, will not be made until the final acceptance and completion of all Work covered by the Contract. All material and work covered by progress payments made shall thereupon become the sole property of the College, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of all materials and work upon which payments have been made or the restoration of any damaged work, or as waiving the right of the College to require the fulfillment of all of the terms and conditions of the Contract.
- The retainage, if withheld by the College, shall be deposited in an interest bearing account with a bank; and shall be released and paid to the contractor within 45 days of final acceptance of the project by the College.

- 7.6 Final Payment--Certificate of Final Completion. Upon completion and Final Acceptance of all the Work required by the Contract Documents, the balance of the unpaid Contract Sum, as adjusted shall be paid to the Contractor within sixty (60) days after the issuance of a Certificate of Final Acceptance, certified by the A/E and approved by the College. Such payment is subject, however, to the execution and delivery by the Contractor to the College of all release, in a satisfactory form, of any and all claims against the College arising under and by virtue of this Contract.
- 7.7 The acceptance by the Contractor of Final Payment shall be and operate as a release to the College of all claims and liability to the Contractor for all things done or furnished in connection with this Work, and for every act, omission or neglect of the College relating to or arising out of this Work. No payment, however, final or otherwise, shall operate to release the Contractor or his Sureties from any obligations under the Contract Documents or the Performance and Payment Bonds.
- 7.8 If, for any reason, the Contractor refuses final payment, the project will be closed out by the College unilaterally processing a Final Acceptance Certificate. All residual funds will be held in escrow by the College until all claims of the College and all Contractors are satisfied.

ARTICLE 8 - UNCOVERING AND CORRECTION OF WORK

- 8.1 Uncovering of Work
- 8.1.1 If any portion of the Work is covered prior to inspection by the C.O. or the A/E, especially work specifically required by the Contract Documents to be inspected, it shall be uncovered for observation. Uncovering and replacement of covering shall be at the installation Contractor's expense. The Contractor is obligated to advise the C.O. or the A/E of all work scheduled to be covered which is reasonably subject to prior inspection before actual covering.
- 8.1.2 If any other portion of the Work (not specifically required to be inspected) has been covered, which the C.O. or the A/E did not make a request to observe prior to being covered, a request may subsequently be made to inspect such Work, and it shall be uncovered by the installation Contractor. If such Work is found to be in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be reimbursed by the College. If such Work is found not to be in accordance with the Contract Documents, the Contractor shall pay all associated costs, unless it is found that this condition was caused by the College, in which event the College shall be responsible for the payment of such costs.
- 8.2 Correction of Work. The Contractor shall promptly correct all Work rejected by the C.O. or the A/E as defective or as failing to conform to the Contract Documents, whether observed before or after Final Acceptance and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including the A/E's additional services, if any.
- 8.3 If the Contractor fails to correct defective or nonconforming Work in a timely manner, the C.O. may make arrangements for such correction by others and charge the cost of so doing to the responsible Contractor and/or his Sureties.
- 8.4 If the Contractor does not proceed with the correction of such defective or nonconforming work within a reasonable time, fixed by written notice from the C.O. or the A/E, the C.O. may remove it and may store the materials or equipment at the expense of the Contractor.
- 8.5 The Contractor shall also be responsible for the cost of making good all Work destroyed or damaged by such correction or removal.
- 8.6 Acceptance of Defective or Nonconforming Work. If the C.O. determines that the best interests of the College will be served by accepting defective or nonconforming Work, he may do so instead of requiring its removal and correction. In such instance, a Change Order will be issued to reflect an appropriate and equitable reduction in the Contract Sum. Such adjustment shall be effected regardless of Final Payment having been previously made, and the Contractor and/or his Surety will be responsible for promptly providing any funds due the College as a result thereof.

ARTICLE 9 - PROTECTION OF PERSONS AND PROPERTY

- 9.1 Safety Precautions and Programs: In order to protect the lives and health of his employees, the Contractor shall comply with all applicable statutes and pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances and methods, and for any damage or injury which may result from his failure or his improper construction, maintenance or operation.
- 9.2 All Contractors shall comply with the Federal Occupational Safety and Health Act of 1970 and all of the rules and regulations promulgated thereunder.
- 9.3 All Contractors shall comply with the N.J. Public Employees Occupational Safety and Health Act of 1984 and all of the rules and regulations promulgated thereunder.
- 9.4 Each Prime Contractor shall be responsible, in cooperation with and under the leadership of the General Contractor, for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He shall designate a responsible member of his 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 C.O. and the A/E.
- 9.5 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.
- 9.6 Emergencies. In an emergency affecting the safety of persons or property, the Contractor shall act with diligence, at his discretion, to prevent threatening injury, damage or loss. In such case, he shall immediately notify the C.O. through the A/E, of the action taken and shall forthwith prepare and submit a detailed and documented request through the A/E to the C.O. for any additional compensation or extension of time claimed by the Contractor on account of emergency Work.

ARTICLE 10 - INSURANCE AND INDEMNITY

10.1 The Contractor shall secure and maintain in force for the term of the contract, insurance coverages provided herein. The Contractor shall provide the C.O. with current Certificates of Insurance for all coverages and renewals thereof which must contain the provision that the insurance provided in the certificate shall not be canceled for any reason except after thirty (30) days written notice to the C.O.

10.1.1 Comprehensive General Liability

Comprehensive General Liability insurance for the benefit of the Contractor and any Subcontractors to be written as broad as the standard coverage form currently in use in the State of New Jersey which shall not be circumscribed by any endorsements limiting the breadth of coverage. The policy shall include an endorsement (broad form) for contractual liability insurance, an endorsement for completed operations insurance, and an endorsement eliminating the explosion, collapse and underground (XCU) exclusion. Limits of liability shall not be less than a total of two million dollars (\$2,000,000), consisting of one million dollars (\$1,000,000) per occurrence for bodily injury liability and one million dollars (\$1,000,000) per occurrence for property liability.

This Comprehensive General Liability insurance shall name the State of New Jersey, Ramapo College, its officers and employees as additional insured.

10.1.2 Comprehensive Automobile Liability

Comprehensive Automobile Liability covering owned, non-owned, and hired vehicles. The limits of liability shall not be less than one million dollars (\$1,000,000) per occurrence for bodily injury and \$500,000 per occurrence for property damage liability.

10.1.3 Workers Compensation

Workers Compensation insurance applicable to the laws of the State of New Jersey and other State or Federal Jurisdiction required to protect the employees of the Contractor or any Subcontractor who will be engaged in the performance of this contract. This insurance shall include Employer's Liability Protection with a limit of liability not less than \$100,000 bodily injury, each occurrence, \$100,000 occupational disease, each employee, and \$500,000 occupational disease, aggregate limit.

10.1.4 Owners and Contractors' Protective Liability Insurance for the College and A/E

A separate Owners' and Contractors' Protective Liability Insurance Policy for the same limits of liability as specified for the Comprehensive General Liability Insurance. The policy shall provide for the College and the A/E to be the names insured. The policy shall be issued for a term of three years, or the term of the Project, whichever is longer, and a receipted invoice for the first three year premium shall be delivered to the College with the policy. Such coverage as required in this paragraph is not intended to, nor should it attempt to, insure the A/E liability for professional errors and omissions.

10.2 Insurance to be Carried by the College

- 10.2.1 Fire Insurance. The College shall provide insurance protection for the benefit of the Contractor and his Subcontractors in the form of a Builders' Risk Insurance Policy providing protection against the perils of fire with extended coverage (which is limited to destruction caused by fire and lightning, wind storm and hail, leakage from fire protective equipment, explosion, smoke, damage caused by vehicles colliding with the structure and damage caused by aircraft, sonic shock, riot and civil commotion, damage resulting from civil and military authority), and vandalism and malicious mischief upon the structure on which the Work on this contract is to be done to 100% of the insurable value thereof, including items of labor and materials connected therewith, whether in or adjacent to the structure insured, and materials in place or to be used as part of the permanent construction including surplus materials.
- 10.2.2 Exclusions. The above insurance shall apply only to the construction of new buildings and new additions to existing buildings which result in the creation of additional habitable space; and shall not apply to alterations, repairs, maintenance and installation of systems, equipment and all other items of work which do not result in creating additional habitable space. This insurance shall not protect against equipment, scaffolding, staging towers or forms, contractor's materials stored on site which are not part of the construction project, and shed or other temporary structures erected for use by the Contractor and Subcontractors. It is understood that the Contractor will, at his own expense, carry all insurance which may be required to provide the necessary protection against such loss or damage herein described which insurance shall contain a waiver of any right of subrogation against the College.

ARTICLE 11 - CHANGES IN THE WORK

11.1 Change Order Procedures

11.1.1 Contractors are required to initiate Change Orders on the standard form provided by the C.O. and distribution shall be made concurrently to the C.O.'s field representative and the A/E. Labor and material breakdown and all pertinent backup must be included.

11.1.2 In order to avoid delays in the progress of Work, the Contracting Officer, at his discretion, may order a Contractor to proceed, even in the absence of a formal Change Order. Contractors shall submit a follow-up Change Order within twenty (20) days from the date of authorization to proceed with the work. The cost of such Work shall then be evaluated by the C.O. on the basis of the reasonable expenditures and savings of those performing the Work, including, in the cases of an increase in the Contract Sum, ten percent (10%) for overhead and five percent (5%) for profit, plus actual cost of additional bond premium, not to exceed one percent (1%). In such case, the Contractor shall keep and present, in such form as the C.O. may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, costs shall be limited to the following:

- a. Net cost of materials, including cost of delivery;
- b. Cost of labor, including Social Security, Old Age and Unemployment Insurance and Fringe Benefits required by agreement or custom;
- c. Worker's or Workman's Compensation Insurance;
- d. Rental value of machinery and equipment;
- e. Ten percent (10%) for overhead, plus five percent (5%) for profit;
- f. Actual cost to the Contractor of any work performed by a Subcontractor plus ten percent (10%) (no additional overhead and profit to be added for the Contractor); and
- g. Actual cost of bond premium, not to exceed one percent (1%).

11.1.3 Pending such final determination of cost by the C.O., payments on account may be made on the A/E's Certificate for Payment, without prejudice to the rights of the parties.

ARTICLE 12 - CONSTRUCTION PROGRESS

- 12.1 The General Construction Contractor shall be responsible for preparing and furnishing to the C.O. through the A/E, before the first Contract Requisition Date or other date specified by the College, a coordinated combined Progress Schedule which incorporates the Progress Schedules of all Prime Contractors engaged on the Project. The Schedule shall be in the form of an arrow network diagram, bar chart or other industry recognized graphic Progress Schedule in sufficient detail to satisfy the A/E and the C.O.
- 12.2 The General Construction Contractor shall submit copies of his initial draft of this Schedule to all Prime Contractors. Each Prime Contractor shall then prepare a Progress Schedule for his own Work, properly coordinated with the General Construction Contractor's initial draft and then submit it to the General Construction Contractor for his preparation of the final draft of a Single Coordinated Progress Schedule. Contract Requisitions will not be processed by the College until and unless such a single coordinated Progress Schedule shall have been submitted to and approved by the A/E and the C.O. This submission shall be no later than thirty (30) calendar days after the award of the Contract. If any Contractor delays his submission, the Project Schedule will be submitted without this input and any payments otherwise due him will be withheld until he complies.
- 12.3 The Progress Schedule based upon the Contractor's logic and time estimates shall indicate, in suitable detail for display; all contractual milestones; all significant features of the Work of each Contractor, including the placing of orders and anticipated delivery dates for critical items; submissions and approvals of Shop Drawings; all work activities to be performed by each Contractor and the beginning and time durations thereof; and the dates of substantial and final completion of the various branches of the Work.
- 12.4 Immediately upon such approval, the General Construction Contractor shall prepare and distribute ten (10) copies of the Progress Schedule to the C.O. plus two (2) copies to each Prime Contractor and to the A/E. In the event a new Prime Contractor is added to the job, the General Construction Contractor shall furnish a revised Schedule immediately with copies as indicated. The final coordinated Schedule shall be signed and dated by all Prime Contractors involved.
- 12.5 Each Contractor shall furnish sufficient labor, construction plant and equipment to insure the prosecution of the Work in accordance with the Project Schedule. If the latest completion time for any significant job does not come within the time allowed by the Project Schedule, the sequence of jobs and/or the time for performance of jobs shall be revised by the Contractor and the General Construction Contractor through concurrent operations, additional manpower, additional shifts, overtime, etc., until it is assured that the Contract Completion Date will be met. No additional charges to the College will be allowed the Contractor(s) for overtime, additional manpower, equipment, additional shifts, etc., (except as may be provided elsewhere in the Contract) if such expediting procedures or measures are necessary to meet the agreed completion date.
- 12.6 Each Contractor agrees that he will make no claim for, and have no right to, additional payment or extension of time for completion of the Work, or any other concession because of any misinterpretation or misunderstanding on his part of the Project Schedule, his failure to attend the pre-bid conference, or because of any failure on his part to fully acquaint himself with all conditions relating to the Project Schedule and the manner in which it will be used on the Project or because of any other Contractor's failure to properly participate in the development of a schedule or to perform his contract in accordance with the schedule.



REQUEST FOR SUBSTITUTION

RCNJ PROJECT NAME: President's Office Suite Alterations
RCNJ PROJECT #: 2014-24-03C

Submit a copy of this form for each requested substitution. Fill in all blanks, check all boxes that apply and attach all necessary supporting data.

Specified Item: _____
Specification Section(s)/Paragraph(s): _____
Drawing Number(s): _____
Proposed Substitute: _____

(include, as applicable, manufacturer's name & address, trade name & model number of product and name of fabricator or supplier)

Reason for Proposed Substitution: _____

The following required supporting documents are attached (Check all that apply):

- ☐ Complete Product Data
- ☐ Itemized comparison of properties of proposed product to specified product.
- ☐ List of other projects on which proposed has been used, with project name, design professional's name and owner contact.
- ☐ List of maintenance services and replacement materials available.
- ☐ Statement of effect of substitution on construction schedule.
- ☐ Description of change that will be required in other work or products if substitute product is approved.

The undersigned testifies that he/she:

- § Is submitting this substitution request within the limits set forth in the Contract Documents.
- § Has investigated the proposed product and determined that it is equal or better than the specified product.
- § Will provide the same warranty for the proposed product as for the specified product.
- § Will coordinate installation and make other changes as required for the work to be complete in all respects, including: (a) redesign and (b) additional components and capacity required by other work affected by the change.
- § Waives all claims for additional costs for evaluation of the substitution request, redesign if required, and re-approval by authorities having jurisdiction, if required.

Contractor's Signature: _____
Typed or Printed Name: _____
Title: _____
Company: _____
Address: _____
Phone Number: _____

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

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

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Locations:

1. **Ramapo College of New Jersey – At Birch Mansion:** 505 Ramapo Valley Road, Mahwah, NJ 07430

B. Owner: Ramapo College of New Jersey

1. Owner's Representative: Director of Facilities

C. Architect: RSC Architects; 3 University Plaza Drive, Suite 600, Hackensack, NJ 07601 Telephone: 201.941.3040 Fax: 201.941.3050

1.3 WORK COVERED BY CONTRACT DOCUMENTS

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

1. **President's Office Suite Alterations:** work consists of the following but not limited to: the alterations of the partial administrative offices of the second level of the Birch Mansion. Spaces included in the renovations are the president's office and conference room, auxiliary offices, corridor, single use restroom and main stairs landing area. Work includes but not limited to: new floor, wall and ceiling finishes, new doors and repurpose of existing and new door hardware. New windows and exterior French doors, new LED lightings throughout, updating existing life safety devices, new plumbing fixtures, new carpentry (i.e. crown molding, chair rails, wainscoting and wood base). In addition,

providing insulation at perimeter walls and ceilings of the President's conference room and office directly below. Installation of new split system, new baseboard radiators and updating existing diffusers. This serves as a summary of the scope of work, this language shall be coordinated with contract drawings for the overall scope of work for this project.

B. Type of Contract:

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

C. Project Schedule:

1. Work of this contract shall be completed within the time as indicated in the procurement documents and in no case shall be completed later than August 28, 2015.

1.4 ACCESS TO SITE

A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations as indicated on the contract documents.
2. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.5 COORDINATION WITH OCCUPANTS

A. Full Owner Occupancy: Owner will occupy site and existing building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.

2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 1. Notify Owner not less than two days in advance of proposed disruptive operations.
 2. Obtain Owner's written permission before proceeding with disruptive operations.
- E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet (8 m) of entrances, operable windows, or outdoor-air intakes.
- F. Controlled Substances: Use of tobacco products and other controlled substances within the existing building on the Project site is not permitted.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

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

- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Contingency allowances.
- C. Related Requirements:
 - 1. Section 012200 "Unit Prices" for procedures for using unit prices.
 - 2. Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.2 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.3 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.4 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.7 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.
- C. Costs of services not required by the Contract Documents are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.

4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Contingency Allowance: Include the sum of \$40,000.00.
 1. This allowance includes material cost, receiving, handling, installation, and Contractor overhead and profit.
 2. Allowance is for addressing hidden conditions that may affect construction and at the Owner's discretion for items related to this contract.
- B. Allowance No. 2: Testing and Inspection Allowance: Include the sum of \$5,000.00.
 1. This allowance includes material cost, receiving, handling, installation, and Contractor overhead and profit.
 2. Coordinate invoicing with Owner requested tests described in the Project Manual or do to unforeseen site conditions.

END OF SECTION 012100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.2 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work an amount incorporated in the Agreement, applicable during the duration of the Work as, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price No. 1 - Plaster Repairs:

1. Description: Sounding out loose plaster in different areas to remove cracks and sagging sections. Provide and install new scratch coat, then apply brown coat and install new finish smooth coat to be flush with adjacent surface. General Contractor to allow for 150 square feet of repair area. Refer to section 092300 "Gypsum Plastering."
2. Unit of Measurement: Square Footage.
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

B. Unit Price No. 2 - Roof Repair

1. Description: Upon exposing roof joists at President's Conference ceiling and framing is not sound. General Contractor shall carefully remove copper ceiling to salvage, replace damaged roof decking with 5/8" plywood, damaged rafter shall be replace with new 2x8 rafters. Prior to reinstallation of copper ceiling, contractor shall install ice and water shield at perimeter of roof and install #30 roofing felt. Reinstall copper roof and make watertight by providing new flashing, caulk and all necessary fasteners. General Contractor to allow for 200 square feet of repair area. Refer to section 070150.19 Preparation for Re-Roofing"
2. Unit of Measurement: Square Footage.
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

C. Unit Price No. 3 - Installation of Harwood Flooring

1. Installation of new 3/4" thick by 5" wide white oak-natural hardwood flooring, nailed down over underlayment. Stain finished (color selected by Owner), with a high traffic finish. This installation shall include transitional strips, shoes at wall and floor junction and modification to top stair tread/riser. In addition, General Contractor shall replace damaged subfloor and/or refasten any loose areas. General Contractor to allow for 600 square feet for the described work. Refer to section 096400 "Wood Flooring".
2. Unit of Measurement: Square Footage.
3. Quality Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Main Stair and Second Floor Flooring (refer to Drawing A2.1 Detail #2)

1. Add Alternate: Remove and dispose of existing carpet, padding and nail strips at the second floor and stair case down to first floor first riser. Upon exposing existing floor, repair any damaged hardwood floor planks by tothing in new plank with a minimum plank overlap of 6". Flooring shall be sanded, receive one coat of stain and finish with three coats of polyurethane sealer (clear). Stain color to be selected by Owner. Coordinate alternate with scope of work on drawing A2.1 and "Unit Price" specification section 012200 for additional information pertaining to this alternate. Total area +/- 430 square feet.

B. Alternate No. 2: Second Floor Corridor Flooring (refer to Drawing A2.1 Detail #2)

1. Add Alternate: Remove and dispose of existing carpet, padding and nail strips at the second floor corridor as shown on Drawing A2.1. Upon exposing existing floor, repair any damaged hardwood floor planks by tothing in new plank with a minimum plank overlap of 6". Flooring shall be sanded, receive one coat of stain and finish with three coats of polyurethane sealer (clear). Stain color to be selected by Owner. Coordinate alternate with scope of work on Drawing A2.1 and "Unit Price" specification section 012200 for additional information pertaining to this alternate. Total area +/- 160 square feet.

END OF SECTION 012300

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 MINOR CHANGES IN THE WORK

- A. Architect will issue through owner supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Owner will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by owner are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use forms provided by Owner.
- B. Contractor-Initiated Work Change Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to the owner.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.

2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Work Change Proposal Request Form: Use forms provided by Owner.

1.4 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

1.5 CHANGE ORDER PROCEDURES

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

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Work Change Directive: Owner may issue a Construction Work Change Directive. Construction Work Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Work Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination drawings.
 - 2. Requests for Information (RFIs).
 - 3. Project meetings.
- B. Related Requirements:
 - 1. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 DEFINITIONS

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

1.3 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts

and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Project closeout activities.
7. Startup and adjustment of systems.

1.4 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - b. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid.
2. Plenum Space: Indicate sub framing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility.

1.5 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. RFI number, numbered sequentially.
 6. RFI subject.
 7. Specification Section number and title and related paragraphs, as appropriate.
 8. Drawing number and detail references, as appropriate.
 9. Field dimensions and conditions, as appropriate.
 10. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 11. Contractor's signature.
 12. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms: AIA Document G716.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or inaccurately prepared RFIs.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

- a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Use CSI Log Form 13.2B. Include the following:
 - 1. Project name.
 - 2. Name and address of Contractor.
 - 3. Name and address of Architect.
 - 4. RFI number including RFIs that were dropped and not submitted.
 - 5. RFI description.
 - 6. Date the RFI was submitted.
 - 7. Date Architect's response was received.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within 7 days if Contractor disagrees with response.
 - 1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 - 2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.6 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Architect responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, and Architect, within three days of the meeting.
- B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
 - 1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.

- d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Preparation of record documents.
 - l. Use of the premises and existing buildings.
 - m. Work restrictions.
 - n. Working hours.
 - o. Owner's occupancy requirements.
 - p. Responsibility for temporary facilities and controls.
 - q. Procedures for moisture and mold control.
 - r. Procedures for disruptions and shutdowns.
 - s. Construction waste management and recycling.
 - t. Parking availability.
 - u. Office, work, and storage areas.
 - v. Equipment deliveries and priorities.
 - w. First aid.
 - x. Security.
 - y. Progress cleaning.
3. Minutes: Architect responsible for conducting meeting will record and distribute meeting minutes.

C. Progress Meetings: Architect will conduct progress meetings at regular intervals.

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

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

3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 2. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.2 DEFINITIONS

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

1.3 ACTION SUBMITTALS

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

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

- a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
 1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Names of subcontractor, manufacturer, and supplier.
 - h. Category and type of submittal.
 - i. Submittal purpose and description.
 - j. Specification Section number and title.
 - k. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - l. Drawing number and detail references, as appropriate.
 - m. Location(s) where product is to be installed, as appropriate.
 - n. Related physical samples submitted directly.
 - o. Indication of full or partial submittal.
 - p. Transmittal number, numbered consecutively.
 - q. Submittal and transmittal distribution record.

- r. Other necessary identification.
 - s. Remarks.
- 5. Metadata: Include the following information as keywords in the electronic submittal file metadata:
 - a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.
 - d. Product name.
- D. Options: Identify options requiring selection by Architect.
- E. Deviations: Identify deviations from the Contract Documents on submittals.
- F. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- H. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:
 - 1. Submit electronic submittals via email as PDF electronic files.
 - a. Architect, will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - 2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.

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

- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Coordination Drawings Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."
- I. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- J. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."
- K. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- L. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- M. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- N. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- O. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- P. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

- R. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- S. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- T. Schedule of Tests and Inspections: Comply with requirements specified in Section 014000 "Quality Requirements."
- U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
 - 1. Laboratory Mockups: Full-size physical assemblies constructed at testing facility to verify performance characteristics.
- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

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

1.4 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.

- B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.5 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Field Reports: Prepare written information documenting tests and inspections specified in other Sections. Include the following:
 - 1. Name, address, and telephone number of representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 5. Other required items indicated in individual Specification Sections.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar in material, design, and extent to those indicated for this Project.
- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- G. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- H. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. When testing is complete, remove test specimens, assemblies, and mockups, and laboratory mockups; do not reuse products on Project.
 - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.

2. Notify Architect and owner seven days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's and owner approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed unless otherwise indicated.

1.7 QUALITY CONTROL

- A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 1. Notify Architect, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.

3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.8 SPECIAL TESTS AND INSPECTIONS

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date test or inspection results were transmitted to Architect.
 - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

1.2 USE CHARGES

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

1.3 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Fire-Safety Program: Show compliance with requirements of authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.

1.4 QUALITY ASSURANCE

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

- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.5 PROJECT CONDITIONS

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

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wood Enclosure Fence: Plywood, 6 feet high, framed with four 2-by-4-inch rails, with preservative-treated wood posts spaced not more than 8 feet apart.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Contractor is not required to have a field office. The use of one shall be coordinated with Owner's Facility Department.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly.
- C. Storage and/or Fabrication Sheds: must be coordinated with Owner's Facility Department.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
 - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of **8** at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 017700 "Closeout Procedures".

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
 - 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- E. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- F. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- G. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- H. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

- I. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Install electric power service overhead unless otherwise indicated.
 - 2. Connect temporary service to Owner's existing power source, as directed by Owner.
- J. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- K. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line(s) for each field office.
 - 1. Provide additional telephone lines for the following:
 - a. Provide a dedicated telephone line for each facsimile machine in each field office.
 - 2. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Contractor's emergency after-hours telephone number.
 - e. Architect's office.
 - f. Engineers' offices.
 - g. Owner's office.
 - h. Principal subcontractors' field and home offices.
 - 3. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 - 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits as required, without disruption to occupancy use.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- C. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 2. Prepare subgrade and install sub-base and base for temporary roads and paved areas according to Section 312000 "Earth Moving."
 3. Recondition base after temporary use, including removing contaminated material, re-grading, pro-frolling, compacting, and testing.
 4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Section 321216 "Asphalt Paving."
- D. Traffic Controls: Comply with requirements of authorities having jurisdiction.
1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- E. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
- G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
1. Identification Signs: Provide Project identification signs as indicated on Drawings.
 2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
 3. Maintain and touchup signs so they are legible at all times.
- H. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."
- I. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

- J. Existing Elevator Use: Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.
 - 1. Do not load elevators beyond their rated weight capacity.
 - 2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.
- K. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- L. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
 - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.
- M. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- C. Temporary Erosion and Sedimentation Control: Comply with requirements specified in Section 311000 "Site Clearing."
- D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- E. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

- F. Tree and Plant Protection: Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."
- G. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- H. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- I. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- J. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- K. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- L. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- M. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather tight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- N. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner and Occupants from fumes and noise.
 - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
 - 2. Construct dustproof partitions with two layers of 6-mil polyethylene sheet on each side. Cover floor with two layers of 6-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
 - a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.

3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 4. Insulate partitions to control noise transmission to occupied areas.
 5. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 6. Protect air-handling equipment.
 7. Provide walk-off mats at each entrance through temporary partition.
- O. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire prevention program.
1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Discard or replace water-damaged and wet material.
 4. Discard, replace, or clean stored or installed material that begins to grow mold.
 5. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

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

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 DEFINITIONS

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

1.3 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product

request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
- b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

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

1.4 QUALITY ASSURANCE

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

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

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

- B. Delivery and Handling:

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

- C. Storage:

- 1. Store products to allow for inspection and measurement of quantity or counting of units.
- 2. Store materials in a manner that will not endanger Project structure.
- 3. Store products that are subject to damage by the elements, under cover in weather tight enclosure above ground, with ventilation adequate to prevent condensation.
- 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
- 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
- 6. Protect stored products from damage and liquids from freezing.

- D. Material Safety Data Sheets (MSDS) shall be submitted to Owner for the following items but not limited to:
 - 1. Paints, adhesives, cleaning products, powder actuated tools and any other items as requested by Owner.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 - 3. Refer to other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Architect will make selection.
 - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
 - b. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
 - b. Non-restricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.

D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with

requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Installation of the Work.
 - 3. Cutting and patching.
 - 4. Coordination of Owner-installed products.
 - 5. Progress cleaning.
 - 6. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site.
 - 2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 QUALITY ASSURANCE

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

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- C. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 INSTALLATION

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

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

3.5 CUTTING AND PATCHING

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

- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 - 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.6 PROGRESS CLEANING

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

3.7 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements"

3.8 PROTECTION OF INSTALLED CONSTRUCTION

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

END OF SECTION 017300

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 2. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.2 ACTION SUBMITTALS

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

1.3 CLOSEOUT SUBMITTALS

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

1.4 MAINTENANCE MATERIAL SUBMITTALS

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

1.5 SUBSTANTIAL COMPLETION PROCEDURES

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

- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.6 FINAL COMPLETION PROCEDURES

- A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report and warranty.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Submit list of incomplete items in the following format:
 - a. PDF electronic file. Architect will return annotated copy.

1.8 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 - 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - p. Leave Project clean and ready for occupancy.

- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired.

Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Product maintenance manuals.
 - 5. Systems and equipment maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
 - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.
- C. Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
 - 1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

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

navigated file tree. Configure electronic manual to display bookmark panel on opening file.

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

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits.
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

2.3 OPERATION MANUALS

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

7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.4 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 - 1. Standard maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 - 1. Test and inspection instructions.
 - 2. Troubleshooting guide.
 - 3. Precautions against improper maintenance.
 - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - 5. Aligning, adjusting, and checking instructions.
 - 6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

- C. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- D. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original project record documents as part of operation and maintenance manuals.
- F. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
- B. Related Requirements:
 - 1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

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

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

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

2. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.
 2. Format: DWG Version, Microsoft Windows operating system.
 3. Format: Annotated PDF electronic file.
 4. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 5. Refer instances of uncertainty to Architect for resolution.
 6. Architect will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information.
- C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Format: Annotated PDF electronic file.
 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 MISCELLANEOUS RECORD SUBMITTALS

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

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

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

END OF SECTION 017839

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected site elements.
 - 2. Salvage of existing items to be reused or recycled.
 - 3. Coordinate with section "011000" Summary part 1.6.B "Work Restriction".
 - 4. Coordinate with section "012100" Allowances.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at specified Passaic School, as indicated on Contract Documents.

1.4 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
 - 1. Before selective demolition, Owner will remove any existing furniture, equipment, etc. that is in Owner's interest to re-use.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. Hazardous materials will be removed by Owner before start of the Work.
 - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.5 WARRANTY

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

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- D. Engage a professional engineer to perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Section 011000 "Summary."
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.
- C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Section 015000 "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 5. Dispose of demolished items and materials promptly.
- B. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition adequate for intended reuse.
 - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 - 3. Protect items from damage during transport and storage.
 - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Wood blocking and nailers.
3. Wood furring.
4. Wood sleepers.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

1.3 INFORMATIONAL SUBMITTALS

A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.
4. Powder-actuated fasteners.
5. Expansion anchors.
6. Metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
 3. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness unless otherwise indicated.
- C. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
1. Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron for sill plates.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat all rough carpentry unless otherwise indicated.
1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
 4. Wood framing members that are less than 18 inches above the ground in crawlspaces or unexcavated areas.
 5. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-

test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 - 2. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
- C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. Application: Treat all rough carpentry unless otherwise indicated.

2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
 - 3. Furring.
 - 4. Grounds.
- B. For items of dimension lumber size, provide Standard, Stud, or No. 2 grade lumber of any species.
- C. For concealed boards, provide lumber with 15 percent maximum moisture content and any of the following species and grades:
 - 1. Mixed southern pine; No. 2 grade; SPIB.
 - 2. Eastern softwoods; No. 2 Common grade; NeLMA.
 - 3. Northern species; No. 2 Common grade; NLGA.
 - 4. Western woods; Standard or No. 2 Common grade; WCLIB or WWPA.

2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Power-Driven Fasteners: NES NER-272.
- C. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

2.6 METAL FRAMING ANCHORS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide products by one of the following:
 - 1. Simpson Strong-Tie Co., Inc.
 - 2. Or approved equal.
- B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those of basis-of-design products. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.
 - 1. Use for interior locations unless otherwise indicated.
- D. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 (Z550) coating designation; and not less than 0.036 inch thick.
 - 1. Use for wood-preservative-treated lumber and where indicated.

2.7 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch nominal thickness, compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of sill members indicated.
- B. Sill-Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to suit width of sill members indicated.
- C. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- D. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- E. Do not splice structural members between supports unless otherwise indicated.
- F. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- G. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- H. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 - 3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

3.2 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Roof sheathing.
2. Subflooring.
3. Underlayment.
4. Sheathing joint and penetration treatment.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For following products, from ICC-ES:

1. Preservative-treated plywood.
2. Fire-retardant-treated plywood.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.

1. Fire-Resistance Ratings: Indicated by design designations from UL's Fire Resistance Directory.

2.2 WOOD PANEL PRODUCTS

- A. Emissions: Products shall meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Certified Wood: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship":
 - 1. Plywood.
- C. Plywood: Either DOC PS 1 or DOC PS 2 unless otherwise indicated.

2.3 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction, Use Category UC3b for exterior construction.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat items indicated on Drawings and plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.4 FIRE-RETARDANT-TREATED PLYWOOD

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 - 2. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
 - 3. Design Value Adjustment Factors: Treated lumber plywood shall be tested according to ASTM D 5516 and design value adjustment factors shall be calculated according to ASTM D 6305. Span ratings after treatment shall be not less than span ratings specified. For roof sheathing and where high-temperature fire-retardant treatment is indicated, span ratings for temperatures up to 170 deg F shall be not less than span ratings specified.

- C. Kiln-dry material after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.
- E. Application: Treat all plywood unless otherwise indicated.

2.5 WALL SHEATHING (Not Used)

2.6 ROOF SHEATHING

- A. Plywood Roof Sheathing: Exterior sheathing.

2.7 COMPOSITE NAIL BASE INSULATED ROOF SHEATHING (Not Used)

2.8 SUBFLOORING AND UNDERLAYMENT

- A. Plywood Subflooring: Exposure 1, Structural I single-floor panels or sheathing.
- B. Plywood Underlayment for Ceramic Tile: DOC PS 1, Exterior, C-C Plugged, not less than 5/8-inch nominal thickness, for ceramic tile set in latex-portland cement mortar.
- C. Plywood Underlayment for Carpet: DOC PS 1, Interior, Underlayment.

2.9 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. For roof sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

2.10 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS (Not Used)

2.11 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Framing: Formulation complying with APA AFG-01 and ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.
 - 1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 2. Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."
 - 3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's "International Residential Code for One- and Two-Family Dwellings."
- D. Coordinate roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

- A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Subflooring:
 - a. Glue to wood framing.
 - b. Screw to wood framing.
 - c. Space panels 1/8 inch apart at edges and ends.
 - 2. Wall and Roof Sheathing:
 - a. Nail to wood framing. Apply a continuous bead of glue to framing members at edges of wall sheathing panels.
 - b. Space panels 1/8 inch apart at edges and ends.
 - 3. Underlayment:
 - a. Staple to subflooring.
 - b. Space panels 1/32 inch apart at edges and ends.

- c. Fill and sand edge joints of underlayment receiving resilient flooring immediately before installing flooring.

3.3 GYPSUM SHEATHING INSTALLATION (Not Used)

3.4 CEMENTITIOUS BACKER UNIT INSTALLATION

- A. Install panels and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated.

3.5 FOAM-PLASTIC SHEATHING INSTALLATION (Not Used)

3.6 PARTICLEBOARD UNDERLAYMENT INSTALLATION (Not Used)

3.7 HARDBOARD UNDERLAYMENT INSTALLATION (Not Used)

END OF SECTION 061600

SECTION 062023 - INTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Interior trim.
 - 2. Interior board paneling.
 - 3. Shelving.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product.
- B. Samples: For each type of paneling.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Certified Wood: The following wood products shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship":
 - 1. Interior trim.
 - 2. Interior board paneling.
 - 3. Shelving.
- B. Low-Emitting Materials: Composite wood products shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Lumber: DOC PS 20.
 - 1. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.
 - a. For exposed lumber, mark grade stamp on end or back of each piece, or omit grade stamp and provide certificates of grade compliance issued by inspection agency.
- D. Softwood Plywood: DOC PS 1.
- E. Hardboard: AHA A135.4.

- F. MDF: ANSI A208.2, Grade 130, made with binder containing no urea-formaldehyde resin.
- G. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea-formaldehyde resin.
- H. Melamine-Faced Particleboard: Particleboard complying with ANSI A208.1, Grade M-2, finished on both faces with thermally fused, melamine-impregnated decorative paper and complying with requirements of NEMA LD3, Grade VGL, for test methods 3.3, 3.4, 3.6, 3.8, and 3.10.
 - 1. Color: As selected by Architect from manufacturer's full range.

2.2 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Kiln dry lumber and plywood after treatment to a maximum moisture content of 19 and 15 percent respectively.
- B. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. For exposed lumber and plywood indicated to receive a stained or natural finish, mark back of each piece.
- C. Application: Where indicated.

2.3 INTERIOR TRIM

- A. Softwood Lumber Trim:
 - 1. Species and Grade: Southern pine, B & B finish; SPIB.
 - 2. Maximum Moisture Content: 15 percent.

2.4 PANELING

- A. Hardboard Paneling: Interior factory-finished hardboard paneling complying with AHA 135.5.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide product by one of the following:
 - a. Georgia-Pacific Corp.
 - b. Or approved equal.
 - 2. Thickness: 3/4" inch.
 - 3. Grade: A1
 - 4. Surface-Burning Characteristics: As follows, tested according to ASTM E 84:

- a. Flame-Spread Index: 25 or less.
- b. Smoke-Developed Index: 450 or less.

2.5 SHELVING

- A. Shelving: Made from one of the following materials, 3/4 inch thick.
 - 1. Particleboard with radiused and filled or solid-wood front edge.
 - 2. MDF with radiused or solid-wood front edge.
 - 3. MDO softwood plywood with solid-wood edge.
 - 4. Melamine-faced particleboard with radiused and filled front edge.
 - 5. Softwood Boards: Douglas fir-larch, Douglas fir south, or hem-fir; Prime or D finish; NLGA, WCLIB, or WWPA; or southern pine, B & B finish; SPIB; kiln dried.
- B. Shelf Cleats: 3/4-by-3-1/2-inch boards boards with hole and notch to receive clothes rods], as specified above for shelving.

2.6 MISCELLANEOUS MATERIALS

- A. Low-Emitting Materials: Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer for general carpentry use.
 - 1. Wood glue shall have a VOC content of 30 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. Paneling Adhesive: Comply with paneling manufacturer's written recommendations for adhesives.
 - 1. Adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.

3.2 INSTALLATION, GENERAL

- A. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

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1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
2. Countersink fasteners, fill surface flush, and sand unless otherwise indicated.
3. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.

3.3 STANDING AND RUNNING TRIM INSTALLATION

- A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Miter at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints.

3.4 PANELING INSTALLATION

- A. Plywood Paneling: Select and arrange panels on each wall to minimize noticeable variations in grain character and color between adjacent panels. Leave 1/4-inch gap to be covered with trim at top, bottom, and openings. Install with uniform tight joints between panels.
 1. Attach panels to supports with manufacturer's recommended panel adhesive and fasteners. Space fasteners and adhesive as recommended by panel manufacturer.
 2. Conceal fasteners to greatest practical extent.
- B. Hardboard Paneling: Install according to manufacturer's written recommendations. Leave 1/4-inch gap to be covered with trim at top, bottom, and openings. Butt adjacent panels with moderate contact. Use fasteners with prefinished heads matching paneling color.
- C. Board Paneling: Arrange in random-width pattern suggested by manufacturer unless boards or planks are of uniform width.
 1. Install in full lengths without end joints.
 2. Stagger end joints in random pattern to uniformly distribute joints on each wall.
 3. Select and arrange boards on each wall to minimize noticeable variations in grain character and color between adjacent boards. Install with uniform tight joints between boards.
 4. Fasten paneling by face nailing, setting nails, and filling over nail heads.
 5. Fasten paneling with trim screws, set below face and filled.
 6. Fasten paneling by blind nailing through tongues.

3.5 SHELVING INSTALLATION

- A. Cut shelf cleats at ends of shelves about 1/2 inch less than width of shelves and sand exposed ends smooth.
- B. Install shelf cleats by fastening to framing or backing with finish nails or trim screws, set below face and filled. Space fasteners not more than 16 inches o.c.

- C. Install shelf brackets according to manufacturer's written instructions, spaced not more than 32 inches o.c. Fasten to framing members, blocking, or metal backing, or use toggle bolts or hollow wall anchors.
- D. Cut shelves to neatly fit openings with only enough gap to allow shelves to be removed and reinstalled. Install shelves, fully seated on cleats, brackets, and supports.

END OF SECTION 062023

SECTION 064116 - PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Plastic-laminate-faced architectural cabinets.
2. Wood furring, blocking, shims, and hanging strips for installing plastic-laminate-faced architectural cabinets unless concealed within other construction before cabinet installation.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product, including panel products, adhesive for bonding plastic laminate, fire-retardant-treated materials and cabinet hardware and accessories.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
- C. Samples:
 1. Plastic laminates, for each color, pattern, and surface finish.
 2. Thermoset decorative panels, for each color, pattern, and surface finish.

1.3 INFORMATIONAL SUBMITTALS

- A. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Certified participant in AWI's Quality Certification Program.
- B. Installer Qualifications: Certified participant in AWI's Quality Certification Program.

1.5 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install cabinets until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of architectural plastic-laminate cabinets indicated for construction, finishes, installation, and other requirements.
 - 1. Provide labels and certificates from AWI certification program indicating that woodwork, including installation, complies with requirements of grades specified.
- B. Grade: Premium.
- C. Regional Materials: Plastic-laminate cabinets shall be manufactured within 500 miles of Project site.
- D. Type of Construction: Face frame.
- E. Cabinet, Door, and Drawer Front Interface Style: Reveal overlay.
- F. Reveal Dimension: 1/2 inch.
- G. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by woodwork quality standard.
 - 1. Manufacturer: Subject to compliance with requirements, provide products by the following:
 - a. Formica Corporation.
 - b. Or approved equal.
- H. Laminate Cladding for Exposed Surfaces:
 - 1. Horizontal Surfaces: Grade HGS.
 - 2. Postformed Surfaces: Grade HGP.
 - 3. Vertical Surfaces: Grade HGS.
 - 4. Pattern Direction: Vertically for doors and fixed panels, horizontally for drawer fronts.
- I. Dust Panels: 1/4-inch plywood or tempered hardboard above compartments and drawers unless located directly under tops.
- J. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 - 1. As indicated by laminate manufacturer's designations.
 - 2. Match Architect's sample.
 - 3. As selected by Architect from laminate manufacturer's full range in the following categories:
 - a. Solid colors, matte finish.

- b. Wood grains, matte finish.
- c. Patterns, matte finish.

2.2 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Wood Moisture Content: 8 to 13 percent.
- B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Medium-Density Fiberboard: ANSI A208.2, Grade 130, made with binder containing no urea formaldehyde.
 - 2. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.
 - 3. Softwood Plywood: DOC PS 1, medium-density overlay.
 - 4. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no urea formaldehyde.
 - 5. Thermoset Decorative Panels: Particleboard or medium-density fiberboard finished with thermally fused, melamine-impregnated decorative paper and complying with requirements of NEMA LD 3, Grade VGL, for test methods 3.3, 3.4, 3.6, 3.8, and 3.10.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
 - 1. Identify fire-retardant-treated materials with appropriate classification marking of qualified testing agency in the form of removable paper label or imprint on surfaces that will be concealed from view after installation.
- B. Fire-Retardant-Treated Lumber and Plywood: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Kiln dry lumber and plywood after treatment to a maximum moisture content of 19 and 15 percent, respectively.

2.4 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets except for items specified in Section 087111 "Door Hardware (Descriptive Specification)."

- B. Butt Hinges: 2-3/4-inch, five-knuckle steel hinges made from 0.095-inch-thick metal, and as follows:
 - 1. Semiconcealed Hinges for Overlay Doors: BHMA A156.9, B01521.
- C. Back-Mounted Pulls: BHMA A156.9, B02011.
- D. Catches: Roller catches, BHMA A156.9, B03071.
- E. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.
- F. Shelf Rests: BHMA A156.9, B04013; metal, two-pin type with shelf hold-down clip.
- G. Drawer Slides: BHMA A156.9.
 - 1. Grade 1: Side mounted; full-extension type, soft closing; zinc-plated steel with polymer rollers.
- H. Door Locks: BHMA A156.11, E07121.
- I. Drawer Locks: BHMA A156.11, E07041.
- J. Door and Drawer Silencers: BHMA A156.16, L03011.
- K. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
 - 1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.

2.5 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- C. Adhesives: Do not use adhesives that contain urea formaldehyde.
- D. Adhesives: Use adhesives that meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- E. Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.

2.6 FABRICATION

- A. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

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- B. Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
- C. All joints to dovetail.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition cabinets to average prevailing humidity conditions in installation areas.

3.2 INSTALLATION

- A. Grade: Install cabinets to comply with same grade as item to be installed.
- B. Install cabinets level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- C. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- D. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.
- E. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
 - 1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 - 2. Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches o.c. with toggle bolts through metal backing or metal framing behind wall finish.

END OF SECTION 064116

SECTION 064600 - WOOD TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior standing and running trim.
2. Closet and utility shelving.
3. Wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.
4. Shop finishing of wood trim.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product, including finishing materials and processes.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

C. Samples:

1. Lumber for transparent finish, for each species and cut, finished on one side and one edge.
2. Lumber and panel products with shop-applied opaque finish, for each finish system and color, with exposed surface finished.

1.3 INFORMATIONAL SUBMITTALS

A. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates or WI Certified Compliance Program certificates.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Certified participant in AWI's Quality Certification Program or Licensee of WI's Certified Compliance Program.

B. Installer Qualifications: Certified participant in AWI's Quality Certification Program or Licensee of WI's Certified Compliance Program.

1.5 FIELD CONDITIONS

- A. Weather Limitations for Exterior Work: Proceed with installation of exterior wood trim only when existing and forecasted weather conditions permit work to be performed and at least one coat of specified finish to be applied without exposure to rain, snow, or dampness.
- B. Environmental Limitations for Interior Work: Do not deliver or install interior wood trim until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 WOOD TRIM FABRICATORS

- A. Fabricators: Subject to compliance with requirements, provide products by the following:
 - 1. Garden State Lumber Products: as distributed by Dykes Lumber Company
 - 2. Or approved equal

2.2 WOOD TRIM, GENERAL

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of wood trim indicated for construction, finishes, installation, and other requirements.
 - 1. Provide **labels** from AWI WI certification program indicating that woodwork complies with requirements of grades specified.

2.3 EXTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

- A. Grade: **Custom**.
- B. Regional Materials: Exterior trim for transparent finish shall be manufactured within **500 miles (800 km)** of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within **500 miles (800 km)** of Project site.
- C. Certified Wood: Exterior trim for transparent finish shall be certified as "FSC Pure"[**or "FSC Mixed Credit"**] according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and FSC STD-40-004, "FSC Standard for Chain of Custody Certification."
- D. Wood Species: [**All-heart redwood**] [**Western red cedar**] [**Ponderosa pine or sugar pine**] [**Eastern white pine**] <Insert species>.

2.4 INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

- A. Grade: Custom

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- B. Regional Materials: Interior trim for transparent finish shall be manufactured within 500 miles of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- C. Regional Materials: Interior trim for transparent finish shall be manufactured within 500 miles of Project site.
- D. Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural woodwork located in same area of building unless otherwise indicated.
 - 1. Species: White oak or manufacturer standard based on trim model number.
 - 2. Cut: Plain sliced/plain sawn.

2.5 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

- A. Grade: Custom
- B. Regional Materials: Interior trim for opaque finish shall be manufactured within 500 mile of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- C. Regional Materials: Interior trim for opaque finish shall be manufactured within 500 miles of Project site.
- D. Wood Species: Any closed-grain hardwood.

2.6 CLOSET AND UTILITY SHELVING

- A. Grade: Economy.
- B. Shelf Material: 3/4-inch thermoset decorative panel with solid-lumber edge.
- C. Cleats: 3/4-inch thermoset decorative panel
- D. Wood Species: Match species indicated for other types of transparent-finished architectural woodwork located in same area of building unless otherwise indicated
- E. Closet Rods: 1-1/2-inch- diameter, hardwood.

2.7 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of wood trim and quality grade specified unless otherwise indicated.
 - 1. Wood Moisture Content for Interior Materials: 8 to 13 percent.

- B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of wood trim and quality grade specified unless otherwise indicated.
 - 1. Recycled Content of Medium-Density Fiberboard and Particleboard: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 75 percent.
 - 2. Composite Wood and Agrifiber Products: Products shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
 - 3. Medium-Density Fiberboard: ANSI A208.2, Grade 130 made with binder containing no urea formaldehyde.
 - 4. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.
 - 5. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no urea formaldehyde.
 - 6. Thermoset Decorative Panels: Particleboard or medium-density fiberboard finished with thermally fused, melamine-impregnated decorative paper and complying with requirements of NEMA LD 3, Grade VGL, for test methods 3.3, 3.4, 3.6, 3.8, and 3.10.
- C. Water-Repellent Preservative Treated Materials: Comply with AWWA N1 (dip, spray, flood, or vacuum-pressure treatment) for exterior wood trim indicated to receive water-repellent preservative treatment.
 - 1. Preservative Chemicals: 3-iodo-2-propynyl butyl carbamate (IPBC), combined with an insecticide containing chlorpyrifos (CPF).

2.8 MISCELLANEOUS MATERIALS

- A. Exterior Blocking, Shims, and Nailers: Softwood or hardwood lumber[, **pressure-preservative treated**] [, **fire-retardant treated**], kiln dried to less than 15 percent moisture content.
 - 1. Preservative Treatment by Pressure Process: AWWA U1; Use Category UC3b.
 - a. Kiln dry lumber after treatment to a maximum moisture content of 19 percent.
 - b. Mark lumber with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee's (ALSC) Board of Review.
- B. Interior Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- C. Provide self-drilling screws for metal-framing supports.
- D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- E. Adhesives: Do not use adhesives that contain urea formaldehyde.

- F. Adhesives: Use adhesives that meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- G. VOC Limits for Installation Adhesives and Sealants: Use products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Wood Glues: 30 g/L.
 - 2. Multipurpose Construction Adhesives: 70 g/L.
 - 3. Structural Wood Member Adhesive: 140 g/L.
 - 4. Architectural Sealants: 250 g/L.

2.9 FABRICATION

- A. Fabricate wood trim to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Edges of Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.
 - 2. Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch.
- B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members except for members with ends exposed in finished work.
- C. Assemble casings in shop except where shipping limitations require field assembly.

2.10 SHOP PRIMING

- A. Interior Wood Trim for Opaque Finish: Shop prime with one coat of wood primer specified in Section 099123 "Interior Painting."
- B. Interior Wood Trim for Transparent Finish: Shop seal with stain (if required), other required pretreatments, and first coat of finish as specified in Section 099300 "Staining and Transparent Finishing."
- C. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing wood trim, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of wood trim.

2.11 SHOP FINISHING

- A. General: Finish wood trim at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.

- B. General: Drawings indicate items that are required to be shop finished. Finish such items at fabrication shop as specified in this Section. Refer to Section 099123 "Interior Painting" for field finishing wood trim not indicated to be shop finished.
- C. Finish Materials: Use finish materials that meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- D. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing wood trim, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of wood trim. Apply two coats to end-grain surfaces.
- E. Transparent Finish for Interior Trim:
 - 1. Grade: Same as item to be finished.
 - 2. Finish: System - 12, water-based polyurethane.
 - 3. Wash Coat for Closed-Grain Woods: Apply wash-coat sealer to woodwork made from closed-grain wood before staining and finishing.
 - 4. Staining: Match approved sample for color.
 - 5. Open Finish for Open-Grain Woods: Do not apply filler to open-grain woods.
 - 6. Filled Finish for Open-Grain Woods: After staining, apply wash-coat sealer and allow to dry. Apply paste wood filler and wipe off excess. Tint filler to match stained wood.
 - 7. Sheen: Satin, 31-45, Semigloss, 46-60 or Gloss, 61-100 as approved by Architect gloss units measured on 60-degree gloss meter per ASTM D 523.
- F. Opaque Finish for Interior Trim:
 - 1. Grade: Same as item to be finished.
 - 2. Finish: System - 12, water-based polyurethane.
 - 3. Color: As selected by Architect from manufacturer's full range.
 - 4. Sheen: Satin, 31-45, Semigloss, 46-60 or Gloss, 61-100 as approved by Architect gloss units measured on 60-degree gloss meter per ASTM D 523.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition wood trim to average prevailing humidity conditions in installation areas.

3.2 INSTALLATION

- A. Grade: Install wood trim to comply with same grade as item to be installed.

- B. Install wood trim level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- C. Scribe and cut wood trim to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- D. Preservative-Treated Wood: Where cut or drilled in field, treat cut ends and drilled holes according to AWP A M4.
- E. Anchor wood trim to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.
 - 1. For shop-finished items, use filler matching finish of items being installed.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 60 inches long except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.
 - 1. Install wall railings on indicated metal brackets securely fastened to wall framing.
 - 2. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.

END OF SECTION 064600

SECTION 070150.19 - PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Roof tear-off.
 - 2. Partial roof tear-off.
 - 3. Roof re-cover preparation.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Temporary Roofing: Include Product Data and description of temporary roofing system. If temporary roof will remain in place, submit surface preparation requirements needed to receive permanent roof, and submit a letter from roofing membrane manufacturer stating acceptance of the temporary membrane and that its inclusion will not adversely affect the roofing system's resistance to fire and wind.

1.3 INFORMATIONAL SUBMITTALS

- A. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by reroofing operations. Submit before Work begins.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Installer of new membrane roofing system.
- B. Reroofing Conference: Conduct conference at Project site.

1.5 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
 - 1. Coordinate work activities daily with Owner so Owner can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area.

2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated before proceeding with work over the impaired deck area.
- B. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- C. Limit construction loads on roof to avoid collapse.
- D. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

PART 2 - PRODUCTS

2.1 AUXILIARY REROOFING MATERIALS

- A. General: Auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new membrane roofing system.
- B. Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approval's "Approval Guide."

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect existing membrane roofing system that is indicated not to be reroofed.
- B. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- C. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
- D. Verify that rooftop utilities and service piping have been shut off before beginning the Work.

3.2 ROOF TEAR-OFF

- A. General: Notify Owner each day of extent of roof tear-off proposed for that day and obtain authorization to precede.

- B. Partial Roof Tear-Off: Remove (carefully) existing coped roofing other membrane roofing system components down to the deck.

1. Remove roofing underlayment.
2. Remove fasteners from deck.

3.3 DECK PREPARATION

- A. Inspect deck after partial tear-off of membrane roofing system.
- B. Verify that plywood substrate is visibly dry, free of moisture and rot. Do not proceed with roofing work if plywood decking is excessively damaged or rotten.
- C. If broken or loose fasteners that secure deck panels to one another or to structure are observed or if deck appears or feels inadequately attached, immediately notify Architect. Do not proceed with installation until directed by Architect.
- D. If deck surface is not suitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.

3.4 TEMPORARY ROOFING MEMBRANE

- A. Install approved temporary roofing membrane over area to be reroofed.
- B. Remove temporary roofing membrane before installing new roofing membrane.

3.5 ROOF RE-COVER PREPARATION

- A. Remove blisters, ridges, buckles, and other substrate irregularities from existing roofing membrane that inhibit new recover boards from conforming to substrate.
 1. Broom clean existing substrate.
 2. Coordinate with Owner's inspector to schedule times for tests and inspections before proceeding with installation of recover boards.
 3. Verify that existing substrate is dry before proceeding with installation of new felt paper.
 4. Remove materials that are wet or damp.
 5. Provide additional uplift securement for existing roofing system with new screws.

3.6 EXISTING BASE FLASHINGS

- A. Remove existing base flashings around walls.
 1. Clean substrates of contaminants such as, sheet materials, dirt, and debris.
- B. Do not damage metal counter flashings that are to remain. Replace metal counter flashings damaged during removal with counter flashings of same metal, weight or thickness, and finish.

3.7 DISPOSAL

- A. Collect and place demolished materials in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 070150.19

SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-core doors with wood-veneer faces.
2. Factory fitting flush wood doors to frames and factory machining for hardware.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of door. Include factory-finishing specifications.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:

1. Dimensions and locations of blocking.
2. Dimensions and locations of mortises and holes for hardware.
3. Dimensions and locations of cutouts.
4. Undercuts.
5. Requirements for veneer matching.
6. Doors to be factory finished and finish requirements.

C. Samples: For factory-finished doors.

1.3 INFORMATIONAL SUBMITTALS

A. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is a certified participant in AWI's Quality Certification Program.

B. Vendor Qualifications: A vendor that is certified for chain of custody by an FSC-accredited certification body.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Mohawk Flush Doors, Inc.
 - 2. Jeld-Wen, Inc.
 - 3. Or approved equal.

2.2 FLUSH WOOD DOORS, GENERAL

- A. Quality Standard: In addition to requirements specified, comply with AWI.
 - 1. Provide AWI Quality Certification Labels indicating that doors comply with requirements of grades specified.
- B. Certified Wood: Flush wood doors shall be certified as "FSC Pure" according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and to FSC STD-40-004, "FSC Standard for Chain of Custody Certification."
- C. Low-Emitting Materials: Fabricate doors with adhesives and composite wood products that do not contain urea formaldehyde.
- D. Low-Emitting Materials: Fabricate doors with adhesives and composite wood products that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- E. WDMA I.S.1-A Performance Grade:
 - 1. Extra Heavy Duty
- F. Smoke- and Draft-Control Door Assemblies: Listed and labeled for smoke and draft control, based on testing according to UL 1784.
- G. Interior Solid-Core Doors:
 - 1. Grade: Premium, with Grade AA faces.
 - 2. Species: Select white maple.
 - 3. Cut: Plain sliced (flat sliced).
 - 4. Match between Veneer Leaves: Book match.
 - 5. Assembly of Veneer Leaves on Door Faces: Running match.
 - 6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
 - 7. Core: Particleboard.
 - 8. Construction: Five or seven plies. Stiles and rails are bonded to core, then entire unit is abrasive planed before veneering.

2.3 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
- B. Factory machine doors for hardware that is not surface applied.
- C. Openings: Factory cut and trim openings through doors.
 - 1. Light Openings: Trim openings with moldings of material and profile indicated.
 - 2. Glazing: Factory install glazing in doors indicated to be factory finished.
 - 3. Louvers: Factory install louvers in prepared openings.

2.4 SHOP PRIMING

- A. Doors for Opaque Finish: Shop prime faces, all four edges, edges of cutouts, and mortises with one coat of wood primer.

2.5 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
 - 1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.
- B. Factory finish doors that are indicated to receive transparent finish.
- C. Use only paints and coatings that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- D. Transparent Finish:
 - 1. Grade: Premium.
 - 2. Staining: As selected by Architect from manufacturer's full range.
 - 3. Effect: Open-grain finish.
 - 4. Sheen: Satin.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Hardware: For installation, see manufacturers requirements.
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

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FLUSH WOOD DOORS

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1. Install smoke- and draft-control doors according to NFPA 105.
- C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.
- D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- E. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

END OF SECTION 081416

SECTION 081433 - STILE AND RAIL WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior stile and rail wood doors.
2. Interior stile and rail wood doors.
3. Priming, finishing stile and rail wood doors.
4. Fitting stile and rail wood doors to frames and machining for hardware.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and other pertinent data.
- C. Samples: Representing typical range of color and grain for each species of veneer and solid lumber required. Finish Sample with same materials proposed for factory-finished doors.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.
- B. Safety Glass: Provide products complying with testing requirements in 16 CFR 1201, for Category II materials, unless those of Category I are expressly indicated and permitted.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Use only materials that comply with referenced standards and other requirements specified.
- B. Certified Wood: Fabricate doors with all wood products produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- C. Low-Emitting Materials: Fabricate doors with adhesives and composite wood products that do not contain urea-formaldehyde resins.

- D. Low-Emitting Materials: Fabricate doors with adhesives and composite wood products that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 EXTERIOR STILE AND RAIL WOOD DOORS

- A. Exterior Stile and Rail Wood Doors (Matching Existing French Door): Exterior doors complying with WDMA I.S.6, "Industry Standard for Wood Stile and Rail Doors."
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Jeld-Wen, Inc.
 - b. Pella Doors
 - c. Marvin Doors
 - d. Or equal
 2. Finish and Grade: Select from Manufacturer Standard.
 3. Wood Species: Manufacturer's standard softwood species and cut.
 4. Glass: insulating-glass units made from two lites of 3.0-mm-thick, fully tempered glass with 1/4-inch interspace, complying with Section 088000 "Glazing."
- B. Exterior Stile and Rail Wood Doors (Matching Existing French Door): Exterior doors complying with WDMA I.S.6A, "Industry Standard for Architectural Stile and Rail Doors," and with other requirements specified.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jeld-Wen, Inc.
 - b. Pella Doors
 - c. Marvin Doors
 - d. Or equal
 2. Grade: Select from Manufacturer Standard.
 3. Finish: Select from Manufacturer Standard.
 4. Options in first subparagraph below are examples for transparent-finished doors. Fourth option is an example for use where several species are required; if retaining, indicate species in a door schedule on Drawings or insert a schedule at the end of Part 3.
 5. Wood Species and Cut for Transparent Finish: Manufacturer's standard softwood species and cut.
 6. Raised-Panel Thickness: As shown and to patch existing doors.
 7. Glass: Uncoated, clear, insulating-glass units made from two lites of 3.0-mm-thick, fully tempered glass with 1/4-inch interspace, complying with Section 088000 "Glazing."

2.3 INTERIOR STILE AND RAIL WOOD DOORS

- A. Interior Stile and Rail Wood Doors (Matching Interior Raised 4 Panel Doors): Interior doors complying with WDMA I.S.6, "Industry Standard for Wood Stile and Rail Doors."
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Mohawk Flush Doors, Inc.
 - b. Jeld-Wen, Inc.
 - c. Or equal
 2. Finish and Grade: Premium, with Grade AA Faces.
 3. Wood Species: Select white maple.
 4. Glass: Uncoated, clear, fully tempered float glass, 5.0 mm thick complying with Section 088000 "Glazing.". Only applicable to interior doors with full glazing as depicted on the drawings.
- B. Interior Stile and Rail Wood Doors (Matching Interior Raised 4 Panel Doors): Interior doors complying with WDMA I.S.6A, "Industry Standard for Architectural Stile and Rail Doors," and with other requirements specified.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Mohawk Flush Doors, Inc.
 - b. Jeld-Wen, Inc.
 - c. Or equal.
 2. Grade: Grade AA faces.
 3. Finish: Premium
 4. Wood Species and Cut for Transparent Finish: Select white maple with Plain sliced (flat sliced).
 5. Door Construction for Transparent Finish:
 - a. Stile and Rail Construction: Clear lumber; may be edge glued for width.
 - b. Stile and Rail Construction: Veneered, structural composite lumber or veneered, edge- and end-glued clear lumber.
 - c. Raised-Panel Construction: Clear lumber; edge glued for width.
 - d. Raised-Panel Construction: Veneered, wood-based panel product with mitered, raised rims made from matching clear lumber.
 - e. Raised-Panel Construction: Veneered, shaped, wood-based panel product with veneer conforming to raised-panel shape.
 - f. Flat-Panel Construction: Veneered, wood-based panel product.
 6. Door Construction for Opaque Finish:
 - a. Stile and Rail Construction: Clear softwood; may be edge glued for width and finger jointed.
 - b. Stile and Rail Construction: Veneered, structural composite lumber or veneered edge- and end-glued lumber.

- c. Raised-Panel Construction: Clear softwood lumber; edge glued for width.
 - d. Raised-Panel Construction: Shaped, medium-density fiberboard.
 - e. Flat-Panel Construction: Veneered, wood-based panel product.
- 7. Raised-Panel Thickness: As indicated – to match existing doors raised panels.
 - 8. Flat-Panel Thickness: As indicated – to match existing doors raised panels.
 - 9. Glass: Uncoated, clear, fully tempered float glass, 5.0 mm thick, complying with Section 088000 "Glazing." Only applicable to doors receiving glazing.

2.4 STILE AND RAIL WOOD DOOR FABRICATION

- A. Fabricate stile and rail wood doors in sizes indicated for field fitting.
- B. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances and bevels unless otherwise indicated:
 - 1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/2 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide not more than 3/8 inch from bottom of door to top of threshold.
 - a. Comply with NFPA 80 for fire-rated doors.
 - 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
- C. Factory machine doors for hardware that is not surface applied.
- D. Glazed Openings: Trim openings indicated for glazing with solid wood moldings, with one side removable. Miter wood moldings at corner joints.
- E. Glazed Openings: Glaze doors at factory with glass of type and thickness indicated, complying with Section 088000 "Glazing." Install glass using manufacturer's standard elastomeric glazing sealant complying with ASTM C 920. Secure glass in place with removable wood moldings. Miter wood moldings at corner joints.
- F. Transom and Side Panels: Fabricate panels to match adjoining doors in materials, finish, and quality of construction.
- G. Exterior Doors: Factory treat exterior doors after fabrication with water-repellent preservative to comply with WDMA I.S.4. Flash top of out-swinging doors with manufacturer's standard metal flashing.
- H. Pre-hung Doors: Provide stile and rail doors as pre-hung units including doors, frames, and hardware.
 - 1. Provide hardware, including weather stripping and thresholds, that complies with Section 087100 "Door Hardware."

2.5 SHOP PRIMING

- A. Doors for Opaque Finish: Shop prime doors with one coat of wood primer specified in Section 099123 "Interior Painting". Seal all four edges, edges of cutouts, and mortises with primer.
- B. Doors for Transparent Finish: Shop prime doors with stain (if required), other required pretreatments, and first coat of finish as specified in Section 099300 "Staining and Transparent Finishing." Seal all four edges, edges of cutouts, and mortises with first coat of finish.

2.6 FINISHING

- A. Finish wood doors at factory.
- B. Finish wood doors at factory that are indicated to receive transparent finish. Wood doors that are indicated to receive opaque finish may be field finished.
- C. For doors indicated to be factory finished, comply with WDMA I.S.6A, "Industry Standard for Architectural Stile and Rail Doors," and with other requirements specified.
- D. Paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- E. Transparent Finish:
 - 1. Grade: Grade AA faces
 - 2. Finish: Premium
 - 3. Staining: As selected by Architect from manufacturer's full range and to match existing wood doors.
 - 4. Effect: Semi-filled finish, produced by applying an additional finish coat to partially fill the wood pores.
 - 5. Sheen: To match existing door and shall be field verified.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install fire-rated wood door frames level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Countersink fasteners, fill surface flush, and sand smooth.
- B. Hardware: For installation, see Section 087100 "Door Hardware."
- C. Install wood doors to comply with manufacturer's written instructions, WDMA I.S.6A, "Industry Standard for Architectural Stile and Rail Doors," and other requirements specified.
 - 1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.

- D. Field-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors. Machine doors for hardware. Seal cut surfaces after fitting and machining.
1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/2 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 3/8 inch from bottom of door to top of threshold.
 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
- E. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

END OF SECTION 081433

SECTION 087111 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 08 Section “Door Hardware Schedule”.
 - 2. Division 08 Section “Hollow Metal Doors and Frames”.
 - 3. Division 08 Section “Interior Aluminum Doors and Frames”.
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC - International Building Code.
 - 3. NFPA 70 - National Electrical Code.
 - 4. NFPA 80 - Fire Doors and Windows.
 - 5. NFPA 101 - Life Safety Code.
 - 6. NFPA 105 - Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
 - 1. ANSI/BHMA Certified Product Standards - A156 Series
 - 2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Proof of Certification: Provide copy of manufacturer(s) official certification or accreditation document indicating proof of status as a qualified installer of Windstorm assemblies.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- E. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- F. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
1. Function of building, purpose of each area and degree of security required.
 2. Plans for existing and future key system expansion.
 3. Requirements for key control storage and software.
 4. Installation of permanent keys, cylinder cores and software.

5. Address and requirements for delivery of keys.

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

1.5 DELIVERY, STORAGE, AND HANDLING

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

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

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

1.8 MAINTENANCE SERVICE

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

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
- C. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in

writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - 2. Mortise cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 3. Keyway: Match Facility Standard.
- D. Keying System: Each type of lock and cylinders to be factory keyed. Conduct specified "Keying Conference" to define and document keying system instructions and requirements. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner. Incorporate decisions made in keying conference, and as follows:
 - 1. Existing System: Master key or grand master key locks to Owner's existing system.
- E. Key Quantity: Provide the following minimum number of keys:
 - 1. Top Master Key: One (1)
 - 2. Change Keys per Cylinder: Two (2)
 - 3. Master Keys (per Master Key Group): Two (2)
 - 4. Grand Master Keys (per Grand Master Key Group): Two (2)
 - 5. Construction Keys (where required): Ten (10)
- F. Construction Keying: Provide construction master keyed cylinders or temporary keyed construction cores where specified. Provide construction master keys in quantity as required by project Contractor. Replace construction cores with permanent cores. Furnish permanent cores for installation as directed under specified "Keying Conference".
- G. Key Registration List: Provide keying transcript list to Owner's representative in the proper format for importing into key control software.

2.3 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified mortise locksets furnished in the functions as specified in the Hardware Sets. Locksets to be manufactured with a corrosion resistant, stamped 12 gauge minimum formed

steel case and be field-reversible for handing without disassembly of the lock body. Lockset trim (including knobs, levers, escutcheons, roses) to be the product of a single manufacturer. Furnish with standard 2 3/4" backset, 3/4" throw anti-friction stainless steel latchbolt, and a full 1" throw stainless steel bolt for deadbolt functions.

1. Acceptable Manufacturers:

- a. Corbin Russwin Hardware (RU) – ML2000 Series.

B. Lock Trim Design: As specified in Hardware Sets.

2.1 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.2 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SCHEDULE

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
- B. Manufacturer's Abbreviations:
 - 1. MK - McKinney
 - 2. RO - Rockwood
 - 3. RU - Corbin Russwin

Hardware Schedule

Set: 1.0

Doors: 200, 203, 209, 210, 213, 216, 217

3 Hinge	TA2714 BT	US10BE	MK
1 Mortise Lock Office	ML2054 FSL Cylinder and Core to match Facility Stnd	613E	RU

Notes: - Field adjust, repair, and refinish existing door and frame to like new condition and provide any necessary filler plates for proper installation and function of new hardware. match existing frame prep

Set: 2.0

Doors: 201, 202, 203B, 204, 207, 208, 211

3 Hinge	TA2714 BT	US10BE	MK
1 Mortise Lock Passage	ML2010 FSL	613E	RU

Notes: - Field adjust, repair, and refinish existing door and frame to like new condition and provide any necessary filler plates for proper installation and function of new hardware. match existing frame prep

Set: 3.0

Doors: 212

3 Hinge	TA2714 BT	US10BE	MK
1 Mortise Lock Privacy with Indicator	ML2030 FSL M19V	613E	RU

Notes: - Field adjust, repair, and refinish existing door and frame to like new condition and provide any necessary filler plates for proper installation and function of new hardware. match existing frame prep

Set: 4.0

Doors: 203A

6 Hinge	TA2714 BT	US10BE	MK
2 Mortise Locks Dummy Pull	ML2070 FSL	613E	RU
2 Magnetic Catch	900		RO

Notes: - Field adjust, repair, and refinish existing door and frame to like new condition and provide any necessary filler plates for proper installation and function of new hardware. match existing frame prep

Set: 5.0

Doors: 205, 206, 214, 215

6 Hinge	TA2714 BT	US10BE	MK
2 Surface Bolt	630-8	US10BE	RO
2 Mortise Lock Dummy Pull	ML2070 FSL	613E	RU
1 Deadbolt	DL3060 Cylinder and Core to match Facility Stnd	613E	RU

Notes: - Field adjust, repair, and refinish existing door and frame to like new condition and provide any necessary filler plates for proper installation and function of new hardware. match existing frame prep

END OF SECTION 087100

SECTION 088000 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Glass for interior doors.
 - 2. Glass for windows.
 - 3. Glazing sealants and accessories.

1.2 COORDINATION

- A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Glass Samples: For each type of glass product other than clear monolithic vision glass; 12 inches square.
- C. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.
- D. Delegated-Design Submittal: For glass indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Preconstruction adhesion and compatibility test report.

1.5 QUALITY ASSURANCE

- A. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

1.6 PRECONSTRUCTION TESTING

- A. Preconstruction Adhesion and Compatibility Testing: Test each glass product, tape sealant, gasket, glazing accessory, and glass-framing member for adhesion to and compatibility with elastomeric glazing sealants.

1. Testing is not required if data are submitted based on previous testing of current sealant products and glazing materials matching those submitted.

1.7 WARRANTY

- A. **Manufacturer's Special Warranty for Laminated Glass:** Manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. **Basis-of-Design Glass Product:** Subject to compliance with requirements, provide product indicated in glass schedules or comparable product by the following:

1. Pilkington North America
2. Or approved equal.

2.2 PERFORMANCE REQUIREMENTS

- A. **Delegated Design:** Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design glazing.
- B. **Structural Performance:** Glazing shall withstand the following design loads within limits and under conditions indicated determined according to the International Building Code and ASTM E 1300.
- C. **Safety Glazing:** Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.
- D. **Thermal and Optical Performance Properties:** Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
 1. **U-Factors:** Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F.
 2. **Solar Heat-Gain Coefficient and Visible Transmittance:** Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 3. **Visible Reflectance:** Center-of-glazing values, according to NFRC 300.

2.3 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. GANA Publications: "Laminated Glazing Reference Manual" and "Glazing Manual."
 - 2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."
- B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- C. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than the thickness indicated.
- D. Strength: Where annealed float glass is indicated, provide annealed float glass, heat-strengthened float glass, or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened float glass is indicated, provide heat-strengthened float glass or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where fully tempered float glass is indicated, provide fully tempered float glass.

2.4 LAMINATED GLASS

- A. Laminated Glass: ASTM C 1172. Use materials that have a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after fabrication and installation.
 - 1. Construction: Laminate glass with polyvinyl butyral interlayer to comply with interlayer manufacturer's written instructions.
 - 2. Interlayer Thickness: Provide thickness not less than that indicated and as needed to comply with requirements.
 - 3. Interlayer Color: Clear unless otherwise indicated.
- B. Windborne-Debris-Impact-Resistant Laminated Glass: Comply with requirements specified above for laminated glass except laminate glass with the following to comply with interlayer manufacturer's written instructions:
 - 1. Polyvinyl butyral interlayer.

2.5 GLAZING SEALANTS

- A. General:
 - 1. Compatibility: Compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
 3. Field-applied sealants shall have a VOC content of not more than 250 g/L.
 4. Sealants shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
 5. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.
- B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Dow Corning Corporation; 790.
 - b. Or approved equal.

2.6 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
1. AAMA 804.3 tape, where indicated.
 2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
 3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.
- B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:
1. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
 2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.7 MISCELLANEOUS GLAZING MATERIALS

- A. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- B. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- C. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

- D. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- E. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

PART 3 - EXECUTION

3.1 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.
- C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.
- D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- F. Provide spacers for glass lites where length plus width is larger than 50 inches.
- G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

3.2 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first, then to jambs. Cover horizontal framing joints by applying tapes to jambs, then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.

- E. Apply heel bead of elastomeric sealant.
- F. Center glass lites in openings on setting blocks, and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- G. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.3 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- E. Install gaskets so they protrude past face of glazing stops.

3.4 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.5 CLEANING AND PROTECTION

- A. Immediately after installation remove nonpermanent labels and clean surfaces.

- B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.
 - 1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.
- C. Remove and replace glass that is damaged during construction period.

3.6 LAMINATED GLASS SCHEDULE

- A. Glass Type: Clear laminated glass with two plies of fully tempered float glass.
 - 1. Basis-of-Design Product: Viracon; Uncoated Laminated Glass – Clear.
 - 2. Minimum Thickness of Each Glass Ply: 6 mm.
 - 3. Interlayer Thickness: 0.030 inch.
 - 4. Safety glazing required.
 - 5. Or approved equal

END OF SECTION 088000

SECTION 092300 - GYPSUM PLASTERING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Gypsum plasterwork on wood lath.
2. Regular

1.2 ACTION SUBMITTALS

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

1.3 QUALITY ASSURANCE

- A. Sound Transmission Characteristics: Where indicated, provide gypsum plaster assemblies identical to those of assemblies tested for STC ratings per ASTM E 90 and classified according to ASTM E 413 by a qualified testing agency.
- B. Mockups: Before plastering, install mockups of at least 20 sq. ft. in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4 PROJECT CONDITIONS

- A. Comply with ASTM C 842 requirements or gypsum plaster manufacturer's written recommendations, whichever are more stringent.

PART 2 - PRODUCTS

2.1 GYPSUM PLASTER ASSEMBLIES

- A. Low-Emitting Materials: Gypsum plaster assemblies shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Basis of design: National Gypsum Company
1. Base Plaster: Gold Bond Two-Way Hardwall Gypsum Plaster
 2. Finish Plaster: Kal-Kote Smooth Finish Plaster

3. Or approved equal

2.2 ACCESSORIES

- A. General: Comply with ASTM C 841 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.
- B. Plastic Accessories: Fabricated from high-impact PVC.
 1. Cornerbeads: With perforated flanges.
 - a. Small-nose style; use unless otherwise indicated.
 2. Casing Beads: With perforated flanges in depth required to suit plaster bases indicated and flange length required to suit applications indicated.
 - a. Square-edge style; use unless otherwise indicated.

2.3 MISCELLANEOUS MATERIALS

- A. Water for Mixing and Finishing Plaster: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- B. Bonding Compound: ASTM C 631.
- C. Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002 or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of no fewer than three exposed threads.
- D. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 841.
- E. Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch diameter, unless otherwise indicated.

2.4 BASE-COAT PLASTER MATERIALS

- A. Recycled Content of Gypsum Plaster: Postconsumer recycled content plus one-half of pre-consumer recycled content not less than 60 percent.
- B. Base-Coat Plasters, General: ASTM C 28/C 28M and ASTM C 587
- C. Lightweight Gypsum Ready-Mixed Plaster: With mill-mixed perlite aggregate.
 1. Subject to compliance with requirements, provide the following:
 - a. National Gypsum Company
 - b. Or approved equal.

- D. Aggregates for Base-Coat Plasters: ASTM C 35, silica sand.

2.5 FINISH-COAT PLASTER MATERIALS

- A. Recycled Content of Gypsum Plaster: Postconsumer recycled content plus one-half of pre-consumer recycled content not less than 75 percent.
- B. Gypsum Gaging Plaster: ASTM C 28/C 28M and ASTM C 587
 - 1. Subject to compliance with requirements, provide the following:
 - a. National Gypsum Company; Gauging Plaster (Super-White).
 - b. Or approved equal.
- C. Lime: ASTM C 206, Type S, special finishing hydrated lime.
- D. Lime: ASTM C 206, Type N, normal finishing hydrated lime.
- E. Aggregates for Float Finishes: ASTM C 35, silica sand; graded per ASTM C 842.

2.6 PLASTER MIXES

- A. Mixing: Comply with ASTM C 842 and manufacturer's written instructions for applications indicated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.
- B. Fire-Resistance-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.
- C. STC-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.
 - 1. Seal construction at perimeters, behind control and expansion joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations.
 - 2. Comply with ASTM C 919 and manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.
- D. Sound Attenuation Blankets: Where required, install blankets before installing lath unless blankets are readily installed after lath has been installed on one side.

- E. Acoustical Sealant: Where required, seal joints between edges of plasterwork and abutting construction with acoustical sealant.

3.2 INSTALLING ACCESSORIES

- A. General: Install according to ASTM C 841.
- B. Cornerbeads: Install at external corners.
- C. Casing Beads: Install at terminations of plasterwork, except where plaster passes behind and is concealed by other work and where metal screeds, bases, or frames act as casing beads.

3.3 PLASTER APPLICATION

- A. General: Comply with ASTM C 842.
- B. Bonding Compound: Apply on wood lath plaster bases.
- C. Base Coats:
 - 1. Base Coats over Wood Lath: High-strength gypsum plaster with job-mixed sand for scratch and brown coats.
 - 2. Base Coats over Expanded-Metal Lath:
 - a. Scratch Coat: Gypsum wood-fibered plaster; neat or with job-mixed sand.
 - b. Brown Coat: Gypsum lightweight ready-mixed plaster.
- D. Finish Coats:
 - 1. Finish-Coat Mix for Smooth-Troweled Finishes: Gypsum ready-mixed finish plaster.
- E. Plaster Finishes:
 - 1. Provide troweled finish unless otherwise indicated.

3.4 PLASTER REPAIRS

- A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.
- B. Repairs shall be performed in areas as indicated on plan and other areas to conform with the plaster square footage allowance.

END OF SECTION 092300

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Texture finishes.
3. Drywall accessories, finishing materials, fastening devices and adhesives.

1.2 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect the materials of this Section before, during and after installation and to protect the installed work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacement necessary at no additional cost to the Owner.

1.3 QUALITY ASSURANCE

- A. Qualifications of Installers:
1. Use only skilled and experienced gypsum drywall installers laying up the gypsum board, fastening, taping, and finishing.
 2. Helpers and apprentices used for such work shall be under full and constant supervision at all times by thoroughly skilled gypsum drywall installers.
- B. Manufacturer's Recommendations: The manufacturers' recommended methods of installation, when approved by the Owner's representative shall be the basis for acceptance or rejection of actual installation methods used in this work.
- C. Fire Resistance Ratings: Where gypsum drywall systems are indicated for fire-resistance ratings, including those required to comply with governing regulations, provide materials and installations identical with applicable assemblies which have been tested and listed by recognized authorities.
- D. Industry Standards: Comply with applicable requirements of "Application and Finishing of Gypsum Board" by the Gypsum Association.

1.4 ACTION SUBMITTALS

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

1. Textured Finishes: Manufacturer's standard size for each textured finish indicated and on same backing indicated for Work.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- B. Low Emitting Materials: For ceiling and wall assemblies, provide materials and construction identical to those tested in assembly and complying with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 INTERIOR GYPSUM BOARD

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 1. USG Corporation.
 2. Or approved equal.
- B. Gypsum Wallboard: ASTM C 1396/C 1396M.
 1. Thickness: 5/8 inch.
- C. Follow drywall partition types, sizes and thicknesses, as shown on the Drawings.
 1. Provide Ultralight Fire Coat 30 Interior Panels.

2.3 STEEL FRAMING MEMBERS, GENERAL

- A. Components, General: Comply with ASTM C 841. For steel sheet components not included in ASTM C 841, comply with ASTM C 645 requirements for metal, unless otherwise indicated.
- B. Cold-Rolled Channels: Base metal thickness of 0.0538 inch.
 1. Protective Coating: Manufacturer's standard corrosion resistant zinc coating, unless otherwise indicated.
- C. Steel Studs & Runners: Provide 18 ga. metal studs unless noted otherwise on the drawings. All steel framing members to comply with ASTM C-645.
 1. Runners: Provide CR20 runners for floor and ceiling support of studs, and for vertical abutment or drywall work at other work.
 2. Stiffeners: Provide stiffeners for stud wall support per manufacturer's specifications.
 3. Stud System Accessories: Provide stud manufacturer's standard clips, shoes, ties, reinforcements, fasteners and other accessories as needed for a complete studs system.

4. Provide 18 ga. flat strap reinforcement plates for toilet sinks, grab bars, handrails, closet shelving, etc, attachment.
 5. Protective Coating: Manufacturer's standard corrosion resistant zinc coating, unless otherwise indicated.
- D. Furring Members: Provide 18 ga. metal furring unless noted otherwise on the Drawings. Provide manufacturer's standard corrosion resistant zinc coating, unless otherwise indicated.
- E. Fasteners: Type and size recommended by furring manufacturer for the substrate and application indicated.

2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
1. Interior Gypsum Board: Paper.
 2. Fiberglass mesh with PC mortar (for cement backer boards)
- C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

2.5 AUXILIARY MATERIALS

- A. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
- C. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing).
- D. Acoustical Joint Sealant: ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings as demonstrated by testing according to ASTM E 90.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. USG Corporation; SHEETROCK Acoustical Sealant.
 - b. Or approved equal.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Dust Containment: Utilize plastic sheeting suspended from deck to seal off areas where sanding operations occur so as to minimize dust generation. Install temporary filters over HVAC registers and grilles to prevent dust from entering into duct system.

3.2 SURFACE CONDITIONS

A. Inspection:

1. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify this installation may properly commence.
2. Verify that gypsum drywall may be installed in accordance with the original design, all pertinent codes and regulation, and the manufacturer's recommendations as approved by the Architect.

B. Discrepancies:

1. In the event of discrepancy, immediately notify the Architect
2. Do not proceed with installation in areas of the discrepancy until all such discrepancies have been fully resolved.

3.3 INSTALLATION OF DRYWALL

A. General:

1. Locate exposed end butt joints as far from center of walls and ceilings as possible, and stagger not less than 1'-0" in alternate courses of board.
2. Install exposed gypsum board with face side out. Do not install imperfect, damaged or damp boards. Butt boards together for a light contact at edges and ends with no more than 1/16" open space between boards. Do not force into place.
3. Locate either edge or end joints over supports, except in horizontal applications or where intermediate supports or gypsum board back blocking is provided behind end joints. Position boards so that both tapered edge joints abut, and mill cut or field cut end joints abut. Do not place tapered edges against cut edges or ends. Stagger vertical joint over different studs on opposite sides of partitions.
4. Attach gypsum board to framing and blocking as required for additional support at openings and cutouts.
5. Cutting: After scoring face paper and breaking core, cut back paper; do not tear or snap.
6. Form control joints in drywall construction spaced 20'-0" o.c. maximum. Allow 1/2" continuous opening between edges of adjacent boards to allow for insertion of control joints.
7. Do not locate joints within 8" of corners of openings, except where control joints are shown at jamb lines or where openings occur adjacent to corners in the partition/wall layout. Where necessary, place a single vertical joint over the center of wide openings.
8. Install gypsum board and studs up to structure above, unless noted otherwise.
9. Provide perimeter isolation where non-load-bearing partitions abut structural decks or ceilings, or vertical structural elements. Allow not less than 1/4", nor more than 1/2" gap between gypsum and structure. Finish edges of face layer with J-type (semi-finishing) casing bead. Seal space between casing bead and structure with continuous acoustical sealant bead. Attach gypsum board to studs not less than 1/2" below bottom edge of ceiling tracks flanges and to first stud adjacent to vertical tracks. Do not attach board directly to tracks.
10. Floating Construction: Where feasible, including where recommended by manufacturer, install gypsum board with "floating" internal corner construction, unless isolation of the intersection boards is indicated or unless control or expansion joints are indicated.

- B. Method of Drywall Installation: Apply exposed gypsum board on ceiling before applications on walls and partition to the greatest extent possible.

1. Apply in direction which will minimize end joints.
 2. Fasten with screws in accordance with manufacturer's recommendations.
- C. Double Layer Wall Application (where indicated on drawings):
1. Install base layer of gypsum backing board and face layer of exposed gypsum board. Apply layers vertically, with joints of base layer over supports and joints of face layer offset at least 10" with base layer joints. Provide sheet lengths which will minimize end joints in face layer.
 2. Fasten base layer with screws in accordance with manufacturer's instructions.
- D. Install access panels furnished by mechanical and electrical trades.

3.4 INSTALLATION OF DRYWALL FINISHING (JOINT COMPOUND)

- A. Comply with manufacturer's instructions for the mixing handling and application of materials. Machine or hand application is installer's option. Apply treatment at joints both directions, flanges of trim accessories (but not semi-finishing types), penetrations of the gypsum board (electrical boxes, piping and similar work), fastener heads, surface defects and elsewhere as required. Apply in the manner which will result in each of the aforementioned being concealed when applied decoration has been completed.
- B. Apply three (3) coats. Carefully sand the final coat to a uniformly smooth surface completely free from irregularities.

3.5 INSTALLATION OF TRIM ACCESSORIES

- A. Coordinate and integrate the installation of trim accessories with the installation of gypsum board. Use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports.
- B. Install metal corner beads at external corners of drywall work.
- C. Install metal edge trim wherever edge of gypsum board would otherwise be exposed or semi-exposed.
1. Install L-type trim beads where edge is shown to be tightly fitted to abutting work.
 2. Install U-type trim beads where edge is not tightly fitted to abutting work
 3. Install metal edge trim wherever edge of gypsum board would otherwise be exposed or semi-exposed.
 - a. On edges of gypsum board not covered by applied moldings.
 - b. On interior wall panels of exterior walls at the juncture with ceilings.
 - c. At sealant-filled isolation joints and sound control joints, where gypsum drywall work abuts other construction (wall and ceiling).
 - d. At sealant-filled or gasket-filled building expansion joints; install back-to-back units spaced as shown (1/4" if not otherwise shown).
- D. Install control joint bead units where control joints are indicated/or required.
- E. Miter corners of exposed molding and trim units. Align joints and supports to eliminate off-sets.

3.6 CLEANING UP

- A. Do not allow the accumulation of scraps, debris, and sanding dust arising from the work of this section, but maintain the premises in a neat and orderly condition at all times; in the event of spilling or splashing compound onto other surfaces, immediately remove the spilled or splashed material and all traces of the residue to the approval of the Architect.

END OF SECTION 092900

SECTION 093013 - CERAMIC TILING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Ceramic mosaic tile.
2. Waterproof membrane (for thinset applications).
3. Crack isolation membrane.
4. Metal edge strips.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples:

1. Each type and composition of tile and for each color and finish required, as well as for ceramic mosaic tile in color blend patterns, provide samples of each color blend.
2. Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of tile and for each color and finish required.
3. Stone thresholds.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.

1.5 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installer is a five-star member of the National Tile Contractors Association or a Trowel of Excellence member of the Tile Contractors' Association of America.

2. Installer's supervisor for Project holds the International Masonry Institute's Foreman Certification.
 3. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.
- B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Build mockup of wall tile installation at School No. 9 Lobby.
 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide Standard-grade tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
- B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.

2.2 TILE PRODUCTS

- A. Ceramic Tile Type: Factory-mounted glazed ceramic mosaic tile.
1. Basis-of-Design Product: Subject to compliance with requirements, provide one of the following:
 - a. Dal-Tile Corporation.
 - b. Or approved equal.
 2. Composition: Porcelain.
 3. Certification: Porcelain tile certified by the Porcelain Tile Certification Agency.
 4. Module Size: As indicated on drawings.
 5. Thickness: As indicated on drawings.
 6. Face: Plain with cushion edges.
 7. Surface: Smooth, without abrasive admixture.
 8. Dynamic Coefficient of Friction: Not less than 0.42.
 9. Finish: Bright, opaque.
 10. Tile Color and Pattern: As selected by Architect from manufacturer's full range.
 11. Grout Color: As selected by Architect from manufacturer's full range.
 12. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:

2.3 SETTING MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
- B. Dry-Set Portland Cement Mortar (Thinset): ANSI A118.1.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide one of the following:
 - a. Bonsal American; an Oldcastle company.
 - b. Or approved equal.
 - 2. For wall applications, provide nonsagging mortar.

2.4 GROUT MATERIALS

- A. Sand-Portland Cement Grout: ANSI A108.10, consisting of white or gray cement and white or colored aggregate as required to produce color indicated.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide one of the following:
 - a. Bonsal American; an Oldcastle company.
 - b. Or approved equal.

2.5 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Bonsal American, an Oldcastle company; Grout Sealer.
 - b. Or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.

2. Verify that concrete substrates for tile floors installed with thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.
- B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot (1:50) toward drains.
- C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 CERAMIC TILE INSTALLATION

- A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- E. Where accent tile differs in thickness from field tile, vary setting bed thickness so that tiles are flush.
- F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
- G. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
 1. Ceramic Mosaic Tile: 1/8 inch (3.2 mm).

- H. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.
- I. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
 - 1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
- J. Grout Sealer: Apply grout sealer to cementitious grout joints on wall tiles according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.
- K. Install panels and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated.
- L. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness that is bonded securely to substrate.
- M. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.

3.4 INTERIOR CERAMIC TILE INSTALLATION SCHEDULE

- A. Interior Wall Installations, Masonry or Concrete:
 - 1. Ceramic Tile Installation: TCNA W202; thinset mortar.
 - a. Ceramic Tile Type: As indicated on drawings.
 - b. Thinset Mortar: Dry-set portland cement mortar.
 - c. Grout: Sand-portland cement grout.

END OF SECTION 093013

SECTION 096400 - WOOD FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes wood flooring.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For each type of wood flooring and accessory.

1.3 QUALITY ASSURANCE

- A. Hardwood Flooring: Comply with NOFMA's "Official Flooring Grading Rules" for species, grade, and cut.
- B. White Oak-Natural Flooring: Comply with applicable MFMA grading rules for species, grade, and cut.
- C. Softwood Flooring: Comply with WCLIB No. 17 grading rules for species, grade, and cut.
- D. Build a 24"x 24" mockup of flooring demonstrating floor type, installation, and stain color for review and approval prior to installation.

1.4 PROJECT CONDITIONS

- A. Conditioning period begins not less than seven days before wood flooring installation, is continuous through installation, and continues not less than seven days after wood flooring installation.
 - 1. Environmental Conditioning: Maintain an ambient temperature between 65 and 75 deg F and relative humidity planned for building occupants in spaces to receive wood flooring during the conditioning period.
 - 2. Wood Flooring Conditioning: Move wood flooring into spaces where it will be installed, no later than the beginning of the conditioning period.
 - a. Do not install flooring until it adjusts to relative humidity of, and is at same temperature as, space where it is to be installed.
 - b. Open sealed packages to allow wood flooring to acclimatize immediately on moving flooring into spaces in which it will be installed.
- B. After conditioning period, maintain relative humidity and ambient temperature planned for building occupants.

- C. Install factory-finished wood flooring after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. FloorScore Compliance: Wood floors shall comply with requirements of FloorScore Standard.
- B. Low-Emitting Materials: Wood flooring systems shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 WOOD FLOORING

- A. Certified Wood: Provide wood flooring produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- B. Solid-Wood Flooring: Kiln dried to 6 to 9 percent maximum moisture content, tongue and groove and end matched, and with backs channeled.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Armstrong World Industries, Inc.
 - b. Bellawood.
 - c. Carlisle Wide Plank Floors.
 - d. Or approved equal.
 - 2. Species and Grade: White Oak - Natural
 - 3. Cut: Plain sawn.
 - 4. Thickness: 3/4 inch.
 - 5. Face Width: 5 inch.
 - 6. Lengths: Manufacturer's standard.
 - 7. Finishing: Factory.

2.3 FACTORY FINISHING

- A. Finish: UV urethane water base.
 - 1. Color: As selected by Architect in manufacturer's full range.

2.4 SOUND CONTROL UNDERLAYMENT

- A. Sound Control Underlayment: Minimum Impact Insulation Class (IIC) of 55 when tested according to ASTM E 492.
 - 1. Material: Polyurethane foam
 - 2. Thickness: 5/32 inch.

2.5 ACCESSORY MATERIALS

- A. Vapor Retarder: ASTM D 4397, polyethylene sheet not less than 6.0 mils.
- B. Asphalt-Saturated Felt: ASTM D 4869, Type II.
- C. Wood Flooring Adhesive: Mastic recommended by flooring and adhesive manufacturers for application indicated.
 - 1. Adhesive shall have a VOC content of not more than 100 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 2. Adhesive shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- D. Trowelable Leveling and Patching Compound: Latex-modified, hydraulic-cement-based formulation approved by wood flooring manufacturer.
- E. Fasteners: As recommended by manufacturer, but not less than that recommended in NWFA's "Installation Guidelines: Wood Flooring."
- F. Thresholds and Saddles: To match wood flooring. Tapered on each side.
- G. Reducer Strips: To match wood flooring. 2 inches wide, tapered, and in thickness required to match height of flooring.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove coatings, including curing compounds, and other substances on substrates that are incompatible with installation adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- B. Broom or vacuum clean substrates to be covered immediately before product installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with flooring manufacturer's written installation instructions, but not less than applicable recommendations in NWFA's "Installation Guidelines: Wood Flooring."
- B. Provide expansion space at walls and other obstructions and terminations of flooring of not less than 1/2 inch.
- C. Vapor Retarder: Comply with NOFMA's "Installing Hardwood Flooring" for vapor retarder installation and the following:
 - 1. Wood Flooring Nailed to Wood Subfloor: Install flooring over a layer of asphalt-saturated felt.
 - 2. Wood Flooring Nailed to Sleepers over Concrete: Install flooring over a layer of polyethylene sheet with edges overlapped over sleepers and turned up behind baseboards.
 - 3. Wood Flooring Installed Directly on Concrete: Install a layer of polyethylene sheet according to flooring manufacturer's written instructions.
- D. Sound Control Underlayment: Install over vapor retarder in accordance with manufacturer's written instructions.
- E. Solid-Wood Flooring: Blind nail or staple flooring to substrate.
 - 1. For flooring of face width more than 3 inches:
 - a. Install countersunk screws at each end of each piece in addition to blind nailing. Cover screw heads with wood plugs glued flush with flooring.
 - b. Install no fewer than two countersunk nails at each end of each piece, spaced not more than 16 inches along length of each piece, in addition to blind nailing. Fill holes with matching wood filler.

3.3 FIELD FINISHING

- A. Machine-sand flooring to remove offsets, ridges, cups, and sanding-machine marks that would be noticeable after finishing. Vacuum and tack with a clean cloth immediately before applying finish.
 - 1. Comply with applicable recommendations in NWFA's "Installation Guidelines: Wood Flooring."
- B. Fill open-grained hardwood.
- C. Fill and repair wood flooring seams and defects.
- D. Apply floor-finish materials in number of coats recommended by finish manufacturer for application indicated, but not less than one coat of floor sealer and three finish coats.
 - 1. Apply stains to achieve an even color distribution matching approved Samples.
 - 2. For water-based finishes, use finishing methods recommended by finish manufacturer to minimize grain raise.

- E. Cover wood flooring before finishing.
- F. Do not cover wood flooring after finishing until finish reaches full cure, and not before seven days after applying last finish coat.

3.4 PROTECTION

- A. Protect installed wood flooring during remainder of construction period with covering of heavy duty kraft paper or other suitable material. Do not use plastic sheet or film that might cause condensation. Install seam tape at all area where flooring protection joints overlap.

END OF SECTION 096400

SECTION 096519 - RESILIENT VINYL PLANK FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Luxury Vinyl Plank with Micro Bevel Edges

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of floor plank. Include floor plank layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
 - 1. Show details of special patterns.
- C. Samples: Full-size units of each color and pattern of floor planks required.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For vinyl plank flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
- B. FloorScore Compliance: Vinyl plank flooring shall comply with requirements of FloorScore certification.
- C. Low-Emitting Materials: Flooring system shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.2 VINYL PLANK FLOORING

- A. Products: Subject to compliance with requirements, provided by the following:

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1. Mannington Commercial, Nature's Paths (Basis of Design)
 2. Or approved equal.
- B. Plank Standard: ASTM 1700, Class 3, Type B
- C. Wearing Surface: Guard HP Urethane Aluminum Oxide Topcoat Cured by UV Process
- D. Thickness: .100 inches
- E. Wearlayer Thickness: .020 (20 mils)
- F. Size: 4"x36" or as selected by Owner
- G. Colors and Patterns: As selected by Architect from full range of industry colors.

2.3 WALL BASE MATERIALS

- A. Provide 1/8" thick, 4" high wall base with a matte finish, conforming to ASTM F 1861, Type TV – Vinyl, Thermoplastic.

2.4 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by flooring manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by flooring and adhesive manufacturers to suit flooring and substrate conditions indicated.
1. Adhesives shall comply with the following limits for VOC content:
 - a. Vinyl Plank Flooring Adhesives: 50 g/L or less. V-95/Full spread adhesive for non-porous flooring.
 2. Adhesives shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Floor Polish: Provide protective, liquid floor-polish products recommended by flooring manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Prepare substrates according to flooring manufacturer's written instructions to ensure adhesion of resilient products.

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- B. Concrete Substrates: Prepare according to ASTM F 710.
1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by flooring manufacturer. Do not use solvents.
 3. Alkalinity and Adhesion Testing: Perform tests recommended by flooring manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
 4. Moisture Testing: Proceed with installation only after substrates pass testing according to flooring manufacturer's written recommendations, but not less stringent than the following:
 - a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft in 24 hours.
 - b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level.
- C. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.
- D. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- E. Do not install floor vinyl planks until they are the same temperature as the space where they are to be installed.
- F. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient vinyl flooring plank.

3.2 FLOOR PLANK INSTALLATION

- A. Comply with manufacturer's written instructions for installing flooring plank.
- B. Lay out floor planks from center marks established with principal walls, discounting minor offsets, so planks at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half plank at perimeter.
1. Lay planks square with room axis.
- C. Match floor planks for color and pattern by selecting planks from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed planks.
1. Lay planks in pattern of colors and sizes indicated.
- D. Scribe, cut, and fit floor planks to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

- E. Extend floor planks into toe spaces, door reveals, closets, and similar openings. Extend floor planks to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor planks as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Install floor planks on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of planks installed on covers and adjoining plank. Tightly adhere plank edges to substrates that abut covers and to cover perimeters.
- H. Adhere floor planks to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.3 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor plank for Initial Maintenance.
- B. Floor Polish: Remove soil, adhesive, and blemishes from floor plank surfaces before applying liquid floor polish.
 - 1. Apply one coat.
- C. Cover plank flooring until Substantial Completion.

END OF SECTION 096519

SECTION 096816 - SHEET CARPETING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes tufted carpet and carpet cushion.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show the following:
 - 1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
 - 2. Carpet type, color, and dye lot.
 - 3. Seam locations, types, and methods.
 - 4. Pile direction.
- C. Samples: For each exposed product and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Warrant: Sample of special warranty.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced Installer who is certified by the International Certified Floorcovering Installers Association at the Commercial II certification level.
- B. Fire-Test-Response Ratings: Where indicated, provide carpet and carpet cushion identical to those of assemblies tested for fire response per NFPA 253 by a qualified testing agency.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with CRI 104.

1.7 FIELD CONDITIONS

- A. Comply with CRI 104 for temperature, humidity, and ventilation limitations.

1.8 WARRANTY

- A. Special Warranty for Carpet: Manufacturer agrees to repair or replace components of carpet installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty does not include deterioration or failure of carpet due to unusual traffic, failure of substrate, vandalism, or abuse.
 - 2. Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs, loss of tuft bind strength and delamination.
 - 3. Warranty Period: 10 years from date of Substantial Completion.
- B. Special Warranty for Carpet Cushion: Manufacturer agrees to repair or replace components of carpet cushion installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty includes consequent removal and replacement of carpet and accessories.
 - 2. Warranty does not include deterioration or failure of carpet cushion due to unusual traffic, failure of substrate, vandalism, or abuse.
 - 3. Failure includes, but is not limited to, permanent indentation or compression.
 - 4. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 TUFTED CARPET

- A. Products: Subject to compliance with requirements, provide the following:
 - 1. Milliken Carpet
 - 2. Or approved equal
- B. Pattern:
 - 1. Carpet #1: Heritage "Floral" #FLR41-120 Monument
 - 2. Carpet #2: Illumine "Lucent" #LUC97-Brilliance
- C. Yarn Twist: 100% Antron Legacy Nylon Type 6,6
- D. Pile Thickness: .28" to .312"
- E. Total Weight: 73 oz/yd²
- F. Primary Backing: Endura-Loc
- G. Secondary Backing: Cushion-Loc.
- H. Backcoating: Manufacturer's standard material.

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- I. Backing System: Cushion-Loc
- J. Width: 13.5 feet
- K. Applied Soil-Resistance Treatment: StainSmart
- L. Antimicrobial Treatment: Manufacturer's standard material.
- M. Performance Characteristics: As follows:
 - 1. Appearance Retention Rating: Heavy traffic, 3.0 TARR minimum per ASTM D 7330.
 - 2. Critical Radiant Flux Classification: Not less than 0.22 W/sq. cm.
 - 3. Dry Breaking Strength: Not less than 100 lbf per ASTM D 2646.
 - 4. Tuft Bind: Not less than 8 lbf per ASTM D 1335.
 - 5. Delamination: Not less than 2.5 lbf/in. per ASTM D 3936.
 - 6. Resistance to Insects: Comply with AATCC 24.
 - 7. Colorfastness to Crocking: Not less than 4, wet and dry, per AATCC 165.
 - 8. Colorfastness to Light: Not less than 4 after 40 AFU (AATCC fading units) per AATCC 16, Option E.
 - 9. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria; not less than 1-mm halo of inhibition for gram-negative bacteria; no fungal growth; per AATCC 174.
 - 10. Electrostatic Propensity: Less than 3.5 kV per AATCC 134.
 - 11. Emissions: Provide carpet that complies with testing and product requirements of CRI's "Green Label Plus" program.
 - 12. Emissions: Provide carpet that complies with the product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 CARPET CUSHION

- A. As described in Part-2 Products

2.3 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet and cushion manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and is recommended or provided by carpet and carpet cushion manufacturers.
 - 1. Use adhesives with VOC content not more than 50 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 2. Use adhesives that comply with the product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

- C. Tackless Carpet Stripping: Water-resistant plywood, in strips as required to match cushion thickness and that comply with CRI 104, Section 12.2.
- D. Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for sealing and taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- D. Preparation: Comply with CRI 104, Section 7.3, "Site Conditions; Floor Preparation," and with carpet manufacturer's written installation instructions for preparing substrates.
- E. Installation: Comply with CRI 104 and carpet and carpet cushion manufacturers written installation instructions for the following:
 - 1. Direct-Glue-Down Installation: Comply with CRI 104, Section 9, "Direct Glue-Down Installation."
 - 2. Double-Glue-Down Installation: Comply with CRI 104, Section 10, "Double-Glue-Down Installation."
 - 3. Carpet with Attached-Cushion Installation: Comply with CRI 104, Section 11, "Attached-Cushion Installations."
 - 4. Preapplied Adhesive Installation: Comply with CRI 104, Section 11.4, "Pre-Applied Adhesive Systems (Peel and Stick)."
 - 5. Hook-and-Loop Installation: Comply with CRI 104, Section 11.5, "Hook and Loop Technology."
 - 6. Stretch-in Installation: Comply with CRI 104, Section 12, "Stretch-in Installations."
 - 7. Stair Installation: Comply with CRI 104, Section 13, "Carpet on Stairs" for stretch-in installation.
- F. Comply with carpet manufacturer's written recommendations and Shop Drawings for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under the door in closed position.
- G. Do not bridge building expansion joints with carpet.
- H. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.

- I. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- J. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, non-staining marking device.
- K. Install pattern parallel to walls and borders to comply with CRI 104, Section 15, "Patterned Carpet Installations" and with carpet manufacturer's written recommendations.
- L. Comply with carpet cushion manufacturer's written recommendations.
- M. Perform the following operations immediately after installing carpet:
 - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
 - 2. Remove yarns that protrude from carpet surface.
 - 3. Vacuum carpet using commercial machine with face-beater element.
- N. Protect installed carpet to comply with CRI 104, Section 16, "Protecting Indoor Installations."

END OF SECTION 096816

SECTION 099100 – PAINT STRIPPER

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes application of paint stripping system.
 - 1. Janitorial Paint Stripper.

1.2 ACTION SUBMITTALS

- A. Product Data: For type of product. Include preparation requirements and application instructions.

1.3 QUALITY ASSURANCE

- A. Mockups: Apply mockup of paint stripper to an area of the project that shall receive product in order to demonstrate the effects of it to the surface. Follow manufacturers' recommended method of application.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Products: subject to compliance with requirements; provided the following product:
 - 1. Dorado Strip Model #3032-Janitorial Paint Stripper
 - 2. Or approved equal.

2.2 STRIPPER GENERAL

- A. General Description: Stripper is a low order, low VOC, water-based paint remover.
- B. PRODUCT DATA
 - 1. Viscosity: 6-15,000 cps
 - 2. Appearance: Off white gelled emulsion
 - 3. Specific Gravity: 1.01
 - 4. Boil pt: >100°C
 - 5. pH: 9-11
 - 6. Flash Point: >100°C
 - 7. Theoretical Coverage: 30 to 120 sq./ft. per gallon
 - 8. VOC: 440 g/l & 67 g/l (alternate)
 - 9. Shelf Life: 24 months

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions with applicator present for compliance with requirements for maximum results.
- B. Proceed with application of product only after unsatisfactory conditions have been addressed and accepted by all parties.
- C. Utilize a coating thickness gage to determine paint thickness at applicable substrate.

3.2 PREPARATION

- A. Comply with manufacturer's written instruction and recommendations applicable to substrates indicated.
- B. Always prepare a test are of varying stripper thickness prior to full application. This is assist in the determination of time required for completion of approximate square footage usage and suitability of product for the paint and the substrate.
- C. Cover/protect areas where stripping is not desired, include adjoining surfaces where over spray may travel. In addition, follow additional protective measures recommended by manufacturer suitable for this particular project application.
- D. Thoroughly mix stripper until it becomes homogeneous, usually for 2-5 minutes. Do Not shake and Do Not Dilute.

3.3 APPLICATION

- A. Product may be applied using brush, roller or airless spray application. Refer to manufacturers for additional information regarding application procedures.
- B. Allow for 2 to 24 hours after application in order to commence the paint removal process. Time requirement varies according to the type of coating and the temperature. Coordinate with the "Quality Assurance" section for mockup requirements.
- C. Apply a thick even layer of stripper onto the coating being removed.
 - 1. Roll or brush on. If using a sprayer, always start the sprayer pump at the lowest pressure setting and slowly build up the pressure until an adequate fan patter has been generated
 - 2. Minimum film thickness should be 15 mils.
 - 3. Stripper shall be applied 1.5 to 2 times thicker than the coating to be removed.
 - 4. Refer to manufacturer recommended application methods for additional information.
- D. Re-Application: when there are multiple layers of coating, premature lifting may occur. If this occurs, remove the lifted layers and reapply the stripper. Do not allow the stripper to dry out.

3.4 CLEANING AND PROTECTION

- A. Protect work of other trades against damage from stripper application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- B. Removal of lifted paint can be completed by scraper, squeegee, or wet/dry vacuum suction system.
- C. The stripped surface must be rinsed with water or denatured alcohol to remove all chemical residues before repainting.
- D. Collect lifted paint and dispose of it in accordance with local government regulations. Do not collect and/or store removed paint and stripper waste residue in metal containers. Only use plastic containers.

END OF SECTION 099100

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and the application of paint systems on interior substrates.
 - 1. Gypsum board.

1.2 DEFINITIONS

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

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples: For each type of paint system and in each color and gloss of topcoat.
- C. Product List: For each product indicated. Include printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

1.4 MAINTENANCE MATERIAL SUBMITTALS

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

1.5 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements; provide one of the following products:
 - 1. Sherwin Williams.
 - 2. Benjamin Moore
 - 3. Or approved equal.

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 1. Flat Paints and Coatings: 50 g/L.
 - 2. Nonflat Paints and Coatings: 150 g/L.
 - 3. Dry-Fog Coatings: 400 g/L.
 - 4. Primers, Sealers, and Undercoaters: 200 g/L.

5. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
 6. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
 7. Pretreatment Wash Primers: 420 g/L.
- D. Low-Emitting Materials: Interior paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- E. Colors: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

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

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 INTERIOR PAINTING SCHEDULE

- A. Gypsum Board Substrates:
 - 1. Primer:
 - a. Waterborne Interior Primer and Sealer system: 1 coat.
 - 2. Intermediate:
 - a. Waterborne Interior Egg Shell Finish system: 1 coat.
 - 3. Finish:
 - a. Waterborne Interior Egg Shell Finish system: 1 coat.

END OF SECTION 099123

SECTION 102800 – TOILET ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Technical Specifications, apply to this Section.

1.2 QUALITY ASSURANCE

- A. Qualifications of Installers: For installation of accessories, use only personnel who are thoroughly trained and experienced in the skills involved and who are completely familiar with the manufacturer's recommended methods of installation.
- B. Installation Methods: The recommended installation methods of the manufacturer of the approved units, when those methods have been approved by the Architect, shall become the basis for acceptance or rejection of actual installation methods used in the Work.

1.3 SUBMITTALS

- A. Shop Drawings: Before any materials of this Section are delivered to the job site, submit complete catalog cuts to the Architect.
- B. Installation Methods: Submit copies of the manufacturer's current recommended methods of installation of the units and accessory items.

1.4 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect the materials of this Section before, during and after installation and to protect the installed work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS AND MANUFACTURER

- A. Toilet accessories shall be as scheduled on the Drawings.

2.2 HARDWARE

- A. Provide anchors and fasteners required for complete installation.

2.3 OTHER MATERIALS

- A. All other materials not specifically described but required for a complete and proper installation of the work of this Section, shall be provided by the Contractor and shall be new, first quality of their respective kinds, and subject to approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Inspection:
 - 1. Prior to all Work of this Section, carefully inspect the installed Work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
 - 2. Verify that all accessories may be installed in accordance with the original design and the approved shop drawings.
- B. Discrepancies:
 - 1. In the event of discrepancy, immediately notify the Architect.
 - 2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 INSTALLATION

- A. Anchoring: Install all units in a level and accurate plane in strict accordance with the original design, the approved shop drawings, and the manufacturer's installation instructions, anchoring all components securely.

3.3 CLEANING

- A. Clean all surfaces upon completion of the installation.

END OF SECTION 102800

SECTION 123661 – SOLID SURFACE COUNTERTOPS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes solid surface countertops.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For paneling and trim accessories.

1.3 SYSTEM DESCRIPTION

- A. Performance requirements: Provide counter tops that conform to the following requirements of regulatory agencies:
 - 1. Fungal and Bacterial Resistance: Surface that does not support fungal and bacterial growth as tested in accordance with ASTM G-21 and ASTM G-22.

1.4 PROJECT CONDITIONS

- A. Environmental Requirements: Products must be installed in an interior climate controlled environment.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in unopened factory packaging to the jobsite.
- B. Inspect materials at delivery to assure that specified products have been received.
- C. Store in original packaging in an interior climate controlled location away from direct sunlight.

1.6 QUALITY ASSURANCE

- A. Testing Agency: Acceptable to authorities having jurisdiction.

1.7 WARRANTY

- A. Limited 10 year warranty against material and manufacturing defects.

PART 2 - PRODUCTS

2.1 PLASTIC SHEET PANELING

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product by the following:
 - 1. InPro Corporation – Bio Prism Solid Surface Countertops.
 - 2. Or approved equal.
- B. Surface-Burning Characteristics: As follows when tested by a qualified testing agency according to ASTM E 84. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: 25 or less.
 - 2. Smoke-Developed Index: 450 or less.
- C. Surface Finish: As selected by Architect from manufacturer's full range.
- D. Color: As selected by Architect from manufacturer's full range.

2.2 ACCESSORIES

- A. Trim Accessories: Manufacturer's standard one-piece vinyl extrusions designed to retain and cover edges of panels. Provide division bars, inside corners,[outside corners,] and caps as needed to conceal edges.
 - 1. Color: As selected by Architect from manufacturer's full range.
- B. Adhesive: As recommended by plastic paneling manufacturer and with a VOC content of 50 g/L or less.
- C. Adhesive: As recommended by plastic paneling manufacturer and that complies with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- D. Sealant: Mildew-resistant, single-component, neutral-curing silicone sealant recommended by plastic paneling manufacturer and complying with requirements in Section 079200 "Joint Sealants."
 - 1. Sealant shall have a VOC content of 250 g/L or less.
 - 2. Sealant shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean substrates of substances that could impair adhesive bond, including oil, grease, dirt, and dust.
- B. Condition panels by unpacking and placing in installation space before installation according to manufacturer's written recommendations.
- C. Lay out paneling before installing. Locate panel joints to provide equal panels at ends of walls not less than half the width of full panels.

3.2 INSTALLATION

- A. Install plastic paneling according to manufacturer's written instructions.
- B. Install panels in a full spread of adhesive.
- C. Install trim accessories with adhesive.
- D. Fill grooves in trim accessories with sealant before installing panels, and bed inside corner trim in a bead of sealant.
- E. Maintain uniform space between panels and wall fixtures. Fill space with sealant.
- F. Remove excess sealant and smears as paneling is installed. Clean with solvent recommended by sealant manufacturer and then wipe with clean dry cloths until no residue remains.

3.3 CLEANING

- A. At the completion of the installation, clean surfaces in accordance with the manufacturer's cleaning up and maintenance instructions.

END OF SECTION 066400